United States Department of Agriculture

Marketing and Regulatory Programs

Animal and Plant Health Inspection Service

Importation of Solid Wood Packing Material

Supplement to the Final Environmental Impact Statement—October 2007

Importation of Solid Wood Packing Material

Supplement to the Final Environmental Impact Statement—October 2007

Agency Contact:
Michael Simon
Senior Staff Officer
Quarantine Policy, Analysis and Support
Plant Protection and Quarantine
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 60
Riverdale, MD 20737

Table of Contents

(This page is intentionally left blank.)

Executive Summary

The United States has faced an ongoing and increasing threat from harmful invasive alien species (pests and pathogens) found in the solid wood packaging material (WPM) that accompanies shipments in international trade. Coping with the risks posed by these pest and disease organisms has become an increasingly important issue for most countries as international trade expands. The dynamic nature of international trade and our increasing knowledge of the pest and pathogen risks associated with WPM make it important for the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) to continue to review and consider additional changes to the regulations, as needed. The final environmental impact statement (FEIS) was prepared in August 2003 for the present WPM regulations. This supplement to the WPM FEIS refines APHIS' previous quantitative analysis of the expected environmental impact associated with international compliance with APHIS' current WPM regulations.

The final rule for importation of WPM (September 16, 2004, 69 Federal Register (FR) 55719, Docket No. 02–032–3) was promulgated to provide APHIS with a means to lower the pest risk associated with WPM worldwide in a timely manner. The rule was developed within the framework of international agreements to which the United States is a party. Although interceptions of invasive species in WPM from China and Hong Kong decreased subsequent to the promulgation of the China Interim Rule (September 18, 1998, 63 FR 50099, Docket No. 98–087–1; amended December 17, 1998, 63 FR 69539, Docket No. 98–087–4), interceptions from other parts of the world continued to rise. Serious environmental and economic threats posed from untreated WPM imparted a degree of urgency to the rulemaking process. The mitigation strategy provided by the International Plant Protection Convention's (IPPC) "Guidelines for Regulating Wood Packaging Material in International Trade" (International Standards for Phytosanitary Measures Number 15 (ISPM 15)) set an effective standard that was uniform and equitable to all nations.

The draft environmental impact statement (DEIS) and FEIS for WPM were published in October, 2002 and August, 2003, respectively. One concern voiced during the comment process was over environmental risks associated with the usage of the fumigant, methyl bromide, as a treatment to mitigate pest risks. Of particular concern was the potential of methyl bromide to deplete the atmosphere's ozone layer. Since no countries were yet obligated to comply with ISPM 15 guidelines at the time of preparation of the WPM FEIS, APHIS lacked quantitative data about actual worldwide usage of methyl bromide for this purpose.

Regulations promulgated by the Council on Environmental Quality (CEQ) pursuant to the National Environmental Policy Act of 1969 (NEPA) provide that agencies may prepare supplements to a final EIS whenever "the agency determines that the purposes of the Act will be furthered by doing so." This supplement to the WPM FEIS focuses on preparing a more accurate methyl bromide estimate to ensure that the NEPA documentation adequately informs the decisionmaker and the public about the anticipated environmental impact of the WPM regulation. Since the promulgation of WPM regulations by many countries to meet the ISPM 15 guidelines, actual information is now available about how exporters in many countries comply with these regulations. The specific information now available regarding how exporters in different countries actually comply with ISPM 15 is new information that is relevant to environmental concerns and bears upon the analysis of potential impacts of the actions associated with APHIS' wood packaging rule. Therefore, this specific information is used in this supplement to the WPM FEIS to refine the methyl bromide use estimates provided in the FEIS. This supplementation will allow our analysis to more completely and accurately reflect the compliance that is occurring and the potential environmental impacts associated with that compliance.

The quantitative range for the refined methyl bromide use estimate (822 to 2,351 metric tons (MT) per year) is more narrow than the range determined in the WPM FEIS (384 to 4,630 MT per year), but it is encompassed within the range of the estimate from the WPM FEIS. Although the refined estimates determined for this supplement more accurately portray the range of methyl bromide used for ISPM 15 compliance than previous estimates, the dynamic nature of trade and compliance with trade-related regulations result in the ongoing need for review because this information reflects only the most recent information received. The availability of information about compliance by exporters in some countries is still lacking and, for these countries, this supplement applies conservative assumptions designed to err in favor of overestimating their methyl bromide usage. Through agreement with the provisions of the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, many countries are gradually phasing out the uses of methyl bromide for which alternatives exist, including those uses for WPM. However, methyl bromide for quarantine and preshipment (QPS), as well as for critical uses, is expected to be needed for an extended period of time, such that review of the use of WPM is anticipated to continue at APHIS to ensure that future allotments do not exceed present projections.

Any future selection of alternatives, other than those presently enforced by APHIS, will depend upon changes in world trade and those international agreements related to world trade within which the agency must work. The scientific, economic, and logistical data are not yet adequate to

support a comprehensive risk reduction program or a phaseout of WPM to substitute packaging material, but the dynamic nature of trade and phytosanitary regulations may influence further development of the risk-reducing strategies involved in these alternatives. It is conceivable that future phytosanitary guidelines negotiated under the IPPC could provide the framework for further mitigating pest or pathogen risk through additional limitations on packaging materials. In the meantime, APHIS must continue to address the phytosanitary risks by reducing the threat of invasive species in a manner that promotes the harmonization of international regulatory efforts and the facilitation of trade.

(This page is intentionally left blank.)

I. Introduction

A. Background

With the continual increase of worldwide trade, there has been a concern for an increasing threat from harmful invasive alien species (pests and pathogens) detected on materials used for trade. Specifically, these harmful invasive alien species have been detected on solid wood packaging material (WPM) that accompanies shipments in international trade. Wooden pallets, crating, and dunnage can harbor environmentally and economically harmful species that use the wood as host material, feed upon it, or hitch a ride on it. It is the role of the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) to protect against harmful invasive alien species and to safely facilitate trade. The regulations in 7 Code of Federal Regulations (CFR) 319.40–1 through 319.40–11 contain provisions to mitigate plant pest risks presented by the importation of logs, lumber, or other unmanufactured wood articles.

The regulations restrict the importation of many types of wood articles including wood packaging material such as pallets, crates, boxes, and pieces of wood used to support or brace cargo. On September 16, 2005, a rule was implemented to enforce the USDA–APHIS import regulation for WPM (see appendix D). The 2004 final rulemaking requires WPM, such as pallets, crates, and boxes, used in international trade to support or brace cargo, to be treated to prevent the introduction of harmful insects to U.S. agriculture and to natural, cultivated, and urban forest resources.

WPM is often reused, recycled, or remanufactured. The implementation of the final rule published on September 16, 2004, enabled companies to use WPM that complies with ISPM 15 guidelines promulgated by the International Plant Protection Convention (IPPC) for import and export purposes. Using WPM that has been treated and marked, in accordance with the International Standards for Phytosanitary Measures Number 15 (ISPM 15) guidelines, assures the receiving country that the WPM present within a shipment has been treated.

B. Historical Perspective

Forest ecosystem diversity, function, and productivity have been dramatically altered by the introduction of exotic insects and pathogens. Historically, outbreaks of the Asian longhorned beetle, (*Anoplophora glabripennis* (Motschulsky)), pine shoot beetle, (*Tomicus piniperda* (L.)), and the emerald ash borer, (*Agrilus planipennis* (Fairmaire)) have been

traced to importations of WPM. The brief history of introduction into the United States for Asian longhorned beetle, pine shoot beetle, and emerald ash borer follows below.

- Asian longhorned beetle (ALB) is a native of China and was first found in the United States 1996 in New York City and Amityville, NY (on Long Island). Since then it has been found in Chicago, Summit, and Addison, Illinois. Scientists believe that the beetle entered the United States via wooden crates and pallets used in shipping cargo from China. The only way to get rid of ALB is to cut down, chip, and burn the infested trees. Since 1996, more than 3,000 trees have been destroyed to eradicate this pest in New York and Illinois (USDA, APHIS, 2006a).

- Pine shoot beetle (PSB) was discovered at a Christmas tree farm near Cleveland, Ohio, in July 1992. The only previous U.S. infestation of PSB occurred in New Jersey in 1913. It is believed that PSB was probably introduced into the United States in 1992 by foreign ships carrying PSB-infested wood as dunnage (USDA, APHIS, 2002c). Since the 1992 introduction, PSB has been detected in 16 States. Quarantines have been established in those States to restrict the movement of regulated articles in order to prevent the artificial spread of PSB.

- Emerald ash borer (EAB) was identified as the causative agent in ash tree mortality and decline in Detroit, Michigan. EAB was unknown in North America until June, 2002. Since 2002, EAB has established infestations in Michigan, Ohio, Indiana, Illinois, and Maryland. Quarantines have been established in those States which have become infested with EAB. Under the quarantine, ash trees, branches, logs, and firewood are prohibited from movement from affected counties (USDA, APHIS, 2006b).

Following APHIS' confirmation of these and other pest risks associated with WPM, mitigating measures, risk analyses, and environmental analyses were developed to assist decisionmakers about how best to protect U.S. forests from such pest risks. Environmental analyses for those rulemakings were necessary to address the potential environmental impacts associated with the implementation of each rulemaking. The treatment of WPM, specifically, the options of heat treatment and methyl bromide fumigation, were assessed to consider potential impacts to the human environment, including public health. Of importance in regard to methyl bromide fumigations is its capacity to damage the atmosphere's ozone layer.

The WPM FEIS assessed the methyl bromide treatments for WPM and the potential environmental impacts of such compliance. In addition, the FEIS and supplemental environmental impact statement (SEIS) entitled "Importation of Logs, Lumber, and Other Unmanufactured Wood Articles," (USDA, APHIS, 1998a), the environmental assessment (EA) for the China Interim Rule (USDA, APHIS, 1998b), and the FEIS entitled, "Rule for the Importation of Unmanufactured Wood Articles From Mexico, With Consideration for Cumulative Impact of Methyl Bromide Use" (USDA, APHIS, 2002a), also included analysis of methyl bromide usage and its impact to the environment.

C. Relationship to the Rulemaking Process

This supplement to the WPM FEIS provides additional information for the decisionmaker to determine whether the previous decision to amend the regulations regarding importation of WPM should remain in force as is or whether further changes should be promulgated through the rulemaking process at this time. This determination will be published in a Record of Decision (ROD) in the Federal Register after completion of the final SEIS. The Environmental Protection Agency (EPA) prepared a notice of availability of the draft SEIS which included provisions for a public comment period from March 9 to April 23, 2007 (March 9, 2007, 72 FR 10749, Docket No. ER–FRL–6684–7). Interested parties requested that APHIS extend the comment period to provide additional time for technical review, and APHIS granted an extension of the comment period until June 25, 2007 (May 25, 2007, 72 FR 29294, Docket No. APHIS–2006–0152). APHIS received a total of four public comments on the draft SEIS. Those comments are presented and the substantive issues from those comments are addressed in appendix A. Any substantive comments on the final SEIS received by APHIS up to 30 days after publication by EPA of the notice of availability in the Federal Register will be considered before publication of the ROD (40 CFR 1506.10(b)(2)).

1. History of Rulemaking and NEPA Documentation for WPM

Although there have been treatments for wood pests for many years, there was no programmatic effort to mitigate the associated pest risks of WPM until the China Interim Rule in 1998. This rule consisted of two separate notices (September 18, 1998, 63 FR 50099, Docket No. 98–087–1 and an amendment on December 17, 1998, 63 FR 69539, Docket No. 98–087–4). The rule was promulgated to readily respond to the rapidly increasing pest risks to wood traced to importations of WPM from China and Hong Kong. The interim rule provided very little phase-in time due to the serious nature of the pest risks and the immediate need for mitigation of those risks. The EA for the China Interim Rule (USDA, APHIS, 1998b) was published in September, 1998. The lack of a phase-in period was recognized in this EA prepared for the rule by applying the presumption that all imported WPM from China and Hong Kong would be fumigated

after loading. Although this approach for estimation of methyl bromide usage was known to be conservatively high, initially it was not considered to be outside the possible range of application. It was recognized that some heat treatment and more conservative usage of methyl bromide (treatment of WPM before loading) were anticipated in, at least, the long-term, but the lack of historical data about actual compliance prevented calculation of a refined estimate of methyl bromide usage in the treatment of WPM to be imported from China and Hong Kong to the United States.

Although the interceptions of invasive species in WPM from China and Hong Kong decreased subsequent to promulgation of the China Interim Rule, interceptions on WPM from other parts of the world continued to rise. It was clear that the pest risk from these locations would also need to be mitigated. Concurrent with APHIS' deliberations on potential regulatory options to address the pest risk from WPM from other countries, the international community, through the IPPC, became aware of the pests associated with WPM and began to consider comparable approaches to alleviate pest risks associated with international trade. This international effort to address pest risks ultimately resulted in the guidelines negotiated for regulating WPM in international trade that were published by the IPPC Secretariat (2002) in ISPM 15. The international negotiations and revisions of these guidelines are expected to continue.

APHIS recognized that the ISPM 15 guidelines provided a firm basis for amendments to our regulations and, consequently, APHIS promulgated a final rule that established regulations for importation of WPM that were consistent with those guidelines negotiated in ISPM 15. APHIS' final rule on Importation of Wood Packaging Material was published on September 16, 2004 (69 FR 55719, Docket No. 02–032–3), and was designed to provide mitigations for the potential pest risks from importation of WPM worldwide (see appendix D). The regulations established by this final rule replaced those regulations promulgated under the China Interim Rule.

Unlike the regulations imposed by the China Interim Rule, those countries whose WPM was subject to importation requirements under the final WPM rule were aware of the pending change in regulations and were provided a phase-in period for compliance with those changes. This phase-in period ensured that importers had time to prepare for the regulatory treatments of WPM. Concurrent to this phase-in period, there were decreases in methyl bromide (phaseout) for many usages that were regulated under the Montreal Protocol. Although quarantine treatments (including those for WPM) were not directly subject to phaseout under this international agreement, many countries began to work on alternate treatments for fumigation with methyl bromide (such as heat treatment of WPM) and some were permitting only heat treatment for WPM. Although there were many factors that contributed to the estimates of methyl

bromide usage in the FEIS, the presumption that methyl bromide treatments of WPM would always be applied after the WPM was loaded with cargo did not realistically reflect actual usage. The estimates of methyl bromide usage for alternatives presented in the FEIS for Importation of Solid Wood Packing Material (USDA, APHIS, 2003) sought to make allowance for methods, such as heat treatment and fumigation of methyl bromide, prior to loading with cargo. The characterization of compliance was, however, incomplete in that most countries, at that time, had not yet established their requirements for compliance with regulations of transported WPM. Much of this supplement to the FEIS examines how countries have actually complied with WPM regulations since and, based on that examination, seeks to refine APHIS' early estimates of methyl bromide usage to more accurately reflect actual release from fumigation treatments of WPM.

2. Changes in Methyl Bromide Usage Relative to APHIS Rulemaking

The overall worldwide usage of methyl bromide continues to decline as the phaseout requirements of the Montreal Protocol are met by those countries that are signatories to this international agreement. The worldwide consumption of methyl bromide was 63,960 MT in 1996 compared to 36,866 MT in 2005 (United Nations Environment Programme (UNEP), (Methyl Bromide Technical Options Committee (MBTOC), 2007). This 42 percent reduction in usage of methyl bromide relates almost exclusively to compliance with the phaseout requirements of the Montreal Protocol. It is known that some countries (most notably China) have increased their overall usage of methyl bromide, but those increases by individual countries have not changed the overall worldwide trend towards reduction in usage of methyl bromide. Even China has committed to reduce emissions of methyl bromide from fumigations (UNEP, 2003; Beijing Times, 2003; Mercado, 1999). The impetus for permitting fumigation of WPM with methyl bromide in the final WPM rule was to provide an economical means of compliance for those developing countries with limited resources to ensure their ability to export products loaded on WPM to the United States. This approach also ensured that other countries would accept product shipments from the United States that meet the ISPM 15 guidelines.

In accordance with applicable international agreements, APHIS does consider changes in its regulations governing phytosanitary issues in trade if those measures are transparent, technically justified, and no more restrictive of trade than necessary to achieve an appropriate level of phytosanitary protection. This ensures that any changes in our regulations adhere to principles of the IPPC. Should it become evident that the usage of methyl bromide fumigation in the treatment of WPM is no longer needed by developing countries in order to meet phytosanitary requirements (due to increased availability of substitute packaging materials and other treatment measures in all affected countries), and that

the elimination of methyl bromide fumigation is "not more trade restrictive than required to achieve [an] appropriate level of sanitary or phytosanitary protection," as is specified by provisions of the agreement on the application of sanitary and phytosanitary measures (SPS agreement) of the World Trade Organization (WTO), then APHIS will consider further rulemaking for WPM. Presently, the usage of heat treatment of WPM is the only equivalent to fumigation with methyl bromide for shippers who depend upon WPM. The continuing phaseout of methyl bromide favors expanded usage of heat treatment of WPM. It is also possible, over time, that market forces may favor expanded use of substitute packaging materials such that methyl bromide fumigation of WPM may not be needed to ensure the unrestricted flow of trade. However, present trade heavily depends upon WPM, and fumigation with methyl bromide remains important enough for the shipping industry of some countries that circumstances do not justify immediate elimination of this treatment measure. Therefore, APHIS will continue to monitor and review trade conditions to determine if there is any need for further rulemaking.

International guidelines, such as ISPM 15, are subject to ongoing review and negotiation among the contracting parties to the IPPC. Changes to those guidelines do not necessarily require APHIS to promulgate rule changes, but any changes in phytosanitary requirements that APHIS intends to enforce on the shipping industry would require revisions to the present regulations. Various negotiations to amend certain aspects of the ISPM 15 guidelines are in the process of review by IPPC contracting parties. APHIS monitors these negotiations for potential substantive changes that could result in the need for further rulemaking. Changes to the IPPC guidelines could also require environmental documentation to address the National Environmental Policy Act of 1969 (NEPA) issues associated with those anticipated rule changes. In particular, there has been some concern by IPPC contracting parties that the initial methyl bromide treatment schedule for WPM did not achieve the desired reduction in pest risk. Any changes in application rate would certainly require supplemental environmental documentation. Other potential treatment changes would need to be reviewed to determine whether they would result in any changes in environmental effects.

Since the initial methyl bromide fumigation treatment schedule of Annex I of ISPM 15 (IPPC, 2006), there has been one revision approved by the IPPC (FAO, 2006). This revision does not propose any changes in the dosage for specific temperatures; however, the proposed minimum concentrations of methyl bromide within the fumigation enclosure need to remain elevated for longer durations of time. The lack of change in dosage or rate indicates that methyl bromide usage would not increase. The revised treatment schedules are designed to eliminate pest risk

without the need for additional usage of methyl bromide. More recently, APHIS proposed an interim rule to amend the wood packaging regulations to reflect the revisions to the treatment schedule (June 1, 2007, 72 FR 30460, Docket No. APHIS–2006–0129). Recent review of this change in the treatment schedule indicates that retention of methyl bromide for these longer durations of time can be achieved with adherence to best practices; however, anecdotal evidence suggests that some fumigators are increasing the initial charge of methyl bromide to compensate for potential leakage to ensure adequate concentrations without the need to retreat or top up concentrations during the fumigation (page 291 of UNEP, MBTOC, 2007). Although the revised schedule does not require more usage and any adjustments to our methyl bromide usage estimates, APHIS will continue to keep track of such revisions to ISPM 15 and review the potential environmental impacts.

D. Summary of the Final Environmental Impact Statement

The WPM FEIS (USDA, APHIS, 2003) was prepared in order to consider the potential environmental impacts of the proposal and alternatives, in accordance with NEPA and the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of the NEPA. The findings of that document are incorporated by reference in this SEIS and are summarized below. Alternatives considered within the FEIS included (1) no action (no change in the current regulation), (2) extend the treatments in the China Interim Rule to all countries, (3) adoption of the IPPC "Guidelines for Regulating Wood Packaging Material in International Trade" (the proposed alternative), (4) a comprehensive risk reduction program, and (5) substitute packaging materials only. Each alternative contains an array of component control methods.

Although each alternative (excluding no action) was determined to have the potential to lower pest risk associated with WPM, each alternative (including no action) has the potential for adverse environmental consequences. Under NEPA, those consequences are the aggregate of their individual effectivenesses (efficacies) and the direct and indirect impacts (including cumulative impacts) of their component control methods. The no action alternative would result in the greatest degree of risk from invasive species, with impacts from component control methods that would be expected to increase as international trade increases.

Extension of the treatments, in the China Interim Rule, to all countries would substantially reduce the pest risk from invasive species, but would have the greatest potential for adverse environmental impact from its component control methods. Adoption of the IPPC guidelines also would

provide substantial reduction of pest risk, with substantial environmental impact from its component control methods.

A comprehensive risk reduction program could provide substantial reduction of pest risk, with variable impact from its component control methods, depending upon which methods were selected. It is not feasible to design different combinations of methods for compliance of various countries, at present. Further, based upon the prevalence of pests within those countries, a determinative process to support such a practice would not be scientifically or economically practical. For the comprehensive risk reduction program alternative to be practical and worthy of detailed consideration by APHIS, the array of approved treatments for this alternative would have to be universally applicable and available equally to all countries.

Substitute packing materials only (prohibition of WPM), as suggested in the FEIS, would achieve the greatest reduction of pest risk with the least environmental impact from its component control methods, but would generate some impacts from the manufacturing process. The capability of industry to tool up to manufacture and switch to substitute packaging materials for such large shipping volumes would limit the feasibility or implementation of a switch over. At present, the increased cost of substitute packaging materials relative to WPM and limited application of substitute packaging materials to niche markets do not provide the flexibility needed to fulfill the global trade needs.

The potentially affected environment for the proposed action, as discussed in the FEIS, includes the United States (confronted with threats to its agricultural and environmental ecosystems), the other nations (which would sustain environmental impacts because of measures required by U.S. import requirements), and the Global Commons (which also could sustain environmental impacts because of measures required by U.S. import requirements). Of particular concern is the potential effect of increased use of the fumigant methyl bromide, a chemical that has the capacity to damage the atmosphere's ozone layer. The stratospheric ozone layer shields life on our planet from the harmful effects of ultraviolet radiation. The potential impact from increased usage of methyl bromide is mitigated by the availability of other treatments for WPM, the availability of other packaging materials, and the phaseout of many uses of ozone-depleting chemicals (including methyl bromide other than those critical uses and quarantine and preshipment (QPS) uses that are presently exempted).

The rationale to adopt the IPPC guidelines, rather than selecting one of the other alternatives, involved a number of factors. First, the serious environmental and economic threats imparted a degree of urgency to the

WPM rulemaking process. Although APHIS continues to work on a long-term resolution to the pest-risk problems associated with WPM, the agency needed an effective mitigation strategy capable of being implemented over the short term. Data were available to support the effectiveness of the treatments approved under the IPPC guidelines against many pests of concern to APHIS; however, efficacy data for other treatment options were lacking. There were substantial logistical and operational barriers associated with some of the alternatives, even though they may pose less environmental impact.

APHIS remains committed to developing regulations that reduce the threat of invasive species yet which promote the harmonization of international mitigation efforts and the facilitation of trade. The development of new regulations, therefore, depends upon technological progress and international negotiations to provide an efficient mechanism for addressing phytosanitary risks associated with WPM. Thus, the FEIS considered environmental, economic, scientific, and social factors in an effort to derive an appropriate and effective strategy for the regulation of imported WPM.

(This page is intentionally left blank.)

II. Purpose and Need

The purpose of this SEIS is to reevaluate and refine estimates of methyl bromide usage in the treatment of WPM. This document is consistent with APHIS' intent to further review WPM issues as more data and information are now available. At the time that the methyl bromide estimates in the WPM FEIS were prepared, there was uncertainty due to the limited information available about compliance (see FEIS on pages A–7 to A–9). Regulations promulgated by CEQ pursuant to NEPA provide that agencies may prepare supplements to a final EIS whenever "the agency determines that the purposes of the Act will be furthered by doing so." This SEIS has been prepared to refine the information provided in the FEIS in light of new information available and intended to provide the decisionmaker and the public with the most current information associated with APHIS' WPM rulemaking. The refined methyl bromide estimates presented in this SEIS will be provided to the decisionmaker. The decisionmaker has the authority and responsibility of reviewing the refined information and determining if and how this information will impact the current rule. The refined information may have any number of impacts to the current WPM rule including further deliberation, amendments to the current rule, or no changes to the current rule.

(This page is intentionally left blank.)

III. Environmental Impact Analysis

The focus of this SEIS is the refinement of methyl bromide estimates from compliance with APHIS' WPM regulations. The limited available data provided a rough predictive estimate in the FEIS. More reliable information and more data on actual compliance have since been sought to improve the previous estimates to more accurately reflect actual methyl bromide usage in the treatment of WPM. Although information continues to be collected about the treatment methods used by different countries to comply with ISPM 15, some data gaps continue to exist and some uncertainty remains. Quality information does exist for the compliance treatments in some countries, but reporting in other countries is often limited, lacking, or compiled for overall consumption purposes (not solely for WPM treatment). There are a number of different ways that one can quantitatively calculate the release of methyl bromide to the atmosphere from compliance with ISPM 15. These calculations can continue to be refined as more accurate and more complete information is received.

Reporting of overall methyl bromide usage by many countries is sparse. The annual reporting requirements of the UNEP Secretariat for methyl bromide have increased the overall reporting and those requirements include a follow-up for data quality assurance. Such reporting was reviewed for relative consistency with our findings. All international reporting requirements relate to total methyl bromide production or consumption including both usage for QPS and usage for non-QPS purposes. There has been no formal reporting mechanism established for specific QPS applications, such as treatment of WPM, until recently. Reporting of the QPS production of methyl bromide in 2004 amounted to 10,660 MT (page 12 of UNEP, MBTOC, 2007). The amount used for QPS treatment of wooden packing materials was determined to account for 6.4 percent of the overall QPS usage or 679 MT. Data were, however, not received for 16 of the 70 parties reporting non-zero consumption of QPS methyl bromide. Reported production of methyl bromide for QPS purposes rose from 10,660 MT in 2004 to 13,815 MT in 2005, with the 3,155 MT increase attributed by UNEP largely to implementation of ISPM 15 for treatment of WPM (UNEP, MBTOC, 2007). Other than usage by China to comply with the China Interim Rule, there was virtually no usage for WPM prior to 2005 when most countries promulgated WPM regulations; therefore, this 3,155 MT would largely be attributed to countries other than China and Hong Kong. However, the QPS reporting to UNEP for allowances in 2005 included some changes in the use designations from 2004. For example, some methyl bromide treatment uses classified as critical use exemptions in the United States in 2004 were reclassified in 2005 as QPS based upon export preshipment requirements (EPA, OPP, 2005). The result of this reporting change was that 1,209 MT of the methyl bromide used in the United States in 2005 classified as QPS

would have been classified as critical use exemptions in 2004 and prior years. This 1,209 MT increase in QPS reporting by the United States in 2005 for articles other than WPM accounts for over one-third of the total increase in QPS cited by UNEP (3,155 MT). Such inconsistencies in reporting make any cause-effect relationship for numerical changes between individual years tenuous, at best. The meaning and importance of this rough cumulative data is discussed further in this chapter in relation to the refined estimates with the recognition that the total methyl bromide attributed to WPM worldwide (3,155 MT and 679 MT = 3,834 MT) in 2005 (UNEP, MBTOC, 2007) may not accurately reflect actual usage for this purpose due to reporting inconsistencies that exist.

An attempt was made in this SEIS to gather the best available information for the majority of WPM treatments. This involved requesting compliance information for those countries that are most heavily involved in world trade. For those countries with reliable compliance data, quantitative analysis was the most direct. For those countries lacking compliance data, methyl bromide estimates were based upon projections of the highest likely usage. For many of the larger trading countries, compliance data was available in a form that permitted accurate estimations. Most of these countries provided a percentage of the number of units of WPM that were fumigated. The annual estimates in this SEIS assess only a given year in time. Trying to account for future increases in world trade and other external factors without clear market trends would be speculative, and no attempt has been made to factor this into this analysis. In addition, there are a wide range of chamber and tarpaulin enclosures that are used in methyl bromide fumigations. Limited data are available about the relative frequency of use of each type of fumigation enclosure; therefore, representative fumigation methods were applied to each treatment scenario based upon the compliance data provided by the National Plant Protection Organization (NPPOs) contacted in each country.

Cumulative methyl bromide usage data includes those WPM treatments associated with ISPM 15 compliance by the United States and other WPM treatments in world trade not directly related to APHIS' WPM rule. This includes those countries already subject to compliance treatments under the China Interim Rule. This issue is addressed separately from other methyl bromide usage for QPS and non-QPS purposes.

A. Early Methyl Bromide Estimates for Wood and the China Interim Rule

Estimates of the quantities of methyl bromide released from fumigation of wood products were first made for the EIS entitled Importation of Logs, Lumber, and Other Unmanufactured Wood Articles (USDA, APHIS, 1998a). The methods developed for that EIS were adjusted for use in

estimation of methyl bromide usage in the EA for China Interim Rule. A large part of the quantitative analysis in the China Interim Rule EA (USDA, APHIS, 1998b) was tied to the presumption that the lack of phase-in time for Chinese exporters to prepare for compliance with the rule would result in most, if not all, WPM being fumigated with methyl bromide and all fumigations being conducted to WPM that was already loaded with cargo. The capability of shippers to apply heat treatment, wood preservative treatments, or to treat WPM by fumigation with methyl bromide prior to cargo loading on such short notice was unknown. Thus, the quantitative estimate for methyl bromide used in fumigation resulting from this rule was an intentionally high projection that presumed only fumigation of already loaded WPM.

Although it was recognized that the shipping industry in China would gradually use other available methods, the rough estimate for methyl bromide usage calculated for the China Interim Rule was considered appropriate as an initial estimate with the recognition that the projected usage per unit of WPM would diminish as the industry compliance strategies developed. Those early estimates disregarded issues such as treatment availability, reuse of WPM, lack of tolerances for methyl bromide of some agricultural commodities, lack of compatibility of some commodities (e.g., leather goods and electronic parts) with methyl bromide, and unique fumigation practices; the estimates also did not consider the rapidly increasing trade with China in any projections. The result was an estimate that was higher than initial actual usage by China, but not necessarily unreasonable given the increasing trade (eightfold increase from 1997 to 2005) that has occurred since that time. The potential quantity of methyl bromide determined in the EA for the China Interim Rule was estimated to range from 1,040 to 12,565 MT annually. However, the total methyl bromide produced in China in 2002 for all uses, including not only use on WPM but all QPS and non-QPS usage, amounted only to 3,175 MT (BeijingTimes, 2003; UNEP, 2003) therefore, the upper tail of this early estimate is clearly higher than the actual consumption that occurred in China.

Another assumption in the EA was that the fumigations would occur primarily within containers covered by tarps, as is normally done for treatments of loaded cargo, to comply with APHIS regulations. However, rather than tarping containers, many of those Chinese shippers who were fumigating containers with already loaded cargo were generally testing those containers for airtightness, releasing methyl bromide directly into the closed containers, and often sealing those containers for shipment prior to complete aeration. There were some initial human health concerns expressed by inspectors and workers about the lingering residues of methyl bromide in these containers from this practice. The aeration of such containers has increased since that time to ensure the safety of those

working with such containers. This direct treatment of sealed containers did result in less use of methyl bromide than had been projected for fumigation of containers covered by tarps.

The actual application rates analyzed for the China Interim Rule were based upon those in the APHIS treatment manual (USDA, APHIS, 1998d) at that time. The application rates ranged from 3 to 5 pounds per 1,000 cubic feet of space for a 16-hour period of time. Subsequent analyses were based upon the application rates cited in ISPM 15, that is, 3 to 4 pounds per 1,000 cubic feet of space for a 16-hour period of time. Although this usage rate of 5 pounds per 1,000 cubic feet contributed to a conservatively high methyl bromide estimate in the analysis of the EA for the China Interim Rule, the changes in trade and compliance by China and Hong Kong since that time are encompassed within that initial projected methyl bromide estimate.

B. Application of Early Estimates to Assess Cumulative Impacts

Shortly after completion of the EA for the China Interim Rule, a draft EA was completed for the Proposed Rule for the Importation of Wood Articles from Mexico (USDA, APHIS, 1998c). EPA, in its comments on this document, suggested the agency analyze potential cumulative impacts of methyl bromide for the quarantine uses required by APHIS. This cumulative issue was then addressed through the preparation of an FEIS entitled "Rule for the Importation of Unmanufactured Wood Articles From Mexico, With Consideration for Cumulative Impact of Methyl Bromide Use" (USDA, APHIS, 2002a). Most anticipated pending quarantine uses of methyl bromide, when added to the present usage, were considered to pose negligible cumulative risk; however, the pending worldwide regulation of WPM was considered to require closer review. This FEIS applied the conservative, quantitative methodology used in the China Interim Rule EA to project methyl bromide estimates for a global wood packaging rule that was first being analyzed in the DEIS for the importation of unmanufactured wood articles from Mexico. The quantitative methyl bromide estimate using that methodology gave a potential range of 8,536 to 102,893 MT per year; however, the same paragraph discussed the conservative nature of this estimate and indicated that the actual increase of methyl bromide usage would be closer to one-twentieth of those projected quantities. This was the first recognition of the need to refine WPM methyl bromide estimates for methyl bromide usage to provide more realistic data for pending agency decisions.

The Mexican Unmanufactured Wood DEIS also acknowledged the limited information about compliance with WPM treatment. The DEIS recognized that fumigations are generally directed at the pest risks in the

cargo being treated and there was no particular reason for treating cargo when the target organism was in the WPM. However, the lack of available compliance data for WPM treatments made it difficult to project actual methyl bromide usage, and the decision was made to consider this issue more closely in the EIS for importation of WPM that was being worked on during and after completion of this Mexican Unmanufactured Wood EIS.

C. Estimates From the Final Environmental Impact Statement

The methyl bromide estimates prepared for the draft and final EIS for Importation of Solid Wood Packing Material (USDA, APHIS, 2002b; USDA, APHIS, 2003) involved a systematic review of potential usage to provide more realistic data for program decisions. The limited data available did not provide a clear methodology that could be readily applied to worldwide compliance with WPM regulations. The analysis did consider the influence of certain factors on likely compliance. The factors included—

- the size of a U.S. Customs entry,
- the presence of WPM within a U.S. Customs entry,
- the likely method of treatment (methyl bromide fumigation vs. heat treatment),
- the manner of methyl bromide application,
- the application rate, the amount of methyl bromide vented from the treatment stack by fumigation,
- the compatibility of methyl bromide with associated cargo,
- logistics and cost factors for shippers from other countries,
- the potential reuse of treated WPM, and
- implications of compliance method on international agreements.

D. Refined Methyl Bromide Estimation Based Upon Compliance Data

We now have information about the manner in which many IPPC contracting parties actually comply with ISPM 15 and APHIS' WPM rule; therefore, previous model assumptions are refined in this analysis to more accurately and completely assess potential methyl bromide release from compliance with the rule. This analysis reflects information regarding compliance for calendar year 2005 which includes more than twice as many U.S. Customs entries as in the previous analysis (based on 1997 data) due to recent increases in world trade. This increase in world trade would normally be expected to result in, at least, a doubling in the estimated usage of methyl bromide to comply with ISPM 15 if compliance

were consistent with earlier methyl bromide usage model assumptions. However, the information about actual compliance indicates greater usage of heat treatment than methyl bromide fumigation by most major trading countries. In addition, regular treatment of WPM after cargo loading, which requires more extensive methyl bromide usage, has been verified to occur only for some U.S. Customs entries originating in China (USDA, APHIS, 1999).

Treatment of WPM after cargo loading involves fumigation of up to 20-fold more space than for treatment of WPM before cargo loading, thus, the usage of methyl bromide is commensurately greater for fumigations of WPM after cargo loading. Although such methyl bromide fumigation of loaded cargo from China does increase the overall release of methyl bromide and associated concerns about potential impacts to stratospheric ozone, this usage is considerably less than the worldwide reductions of methyl bromide already made in compliance with the phaseout of methyl bromide required under the Montreal Protocol, and the impact of this WPM treatment with methyl bromide on ozone depletion is dwarfed by the effects of chlorofluorocarbons and other compounds with ozone-depleting potentials that exceed methyl bromide. QPS treatment of wood packaging materials in 2004 was determined to account for 6.4 percent of the overall QPS usage or 679 MT (page 12 of UNEP, MBTOC, 2007). Reported increased production of methyl bromide for QPS purposes totaled 3,155 MT more in 2005, much of which was associated with worldwide ISPM 15 compliance (page 12 of UNEP, MBTOC, 2007). The association of this increase with WPM was discussed earlier in this SEIS and is tenuous due to reporting inconsistencies (see pages 12 to 13). When one compares this roughly 3,834 MT usage increase to the reported 27,094 MT reduction in methyl bromide consumption from 1996 to 2005 (page 35 UNEP, MBTOC, 2007), it is clear that the WPM usage amounts are considerably less use than the amounts being phased out. As the phaseout provisions of the Montreal Protocol are met and the degradation of chlorofluorocarbons with long half-lives progresses, stratospheric ozone recovery will occur.

Ongoing review in the 2006 Scientific Assessment (NOAA et al., 2007) indicates that the Montreal Protocol is working and there are some early signs of stratospheric ozone recovery (page xxxv, Executive Summary in NOAA et al., 2007). The projected date for stratospheric ozone recovery to return to the 1980 baseline selected by UNEP as its milestone is 2065 if current trends continue (page xxxv of the Executive Summary). This assessment further indicates that a number of potential regulatory options are available to accelerate the recovery of the ozone layer by phasing out ozone-depleting substances (ODS) production and consumption. The associated reduction in stratospheric ozone depletion relative to the full recovery of the 1980 baseline projected for phaseout of all methyl bromide

uses in 2005 (36,866 MT consumption) (page 16 of UNEP, MBTOC, 2007) amounts to only 5 percent (NOAA et al., 2007). This topic is discussed in more detail later in this chapter in regard to the refined methyl bromide estimates in this SEIS; however, the potential impact on stratospheric ozone from anthropogenic usage of methyl bromide does justify continuing agency efforts to seek more economical and efficacious alternatives to methyl bromide for phytosanitary treatment purposes, including those related to packaging material regulations.

The refinements to the methyl bromide calculations in this supplement include a closer analysis of the manner in which individual countries actually comply with wood packaging regulations. This involves more comprehensive analyses of information on—

- how exporters in individual countries select their method of treatment (methyl bromide fumigation vs. heat treatment),
- the manner of methyl bromide application,
- the amount of methyl bromide vented from the fumigation,
- the potential reuse of treated WPM, and
- any implications of compliance method on international agreements.

Each of these issues influence the amount of methyl bromide fumigation of WPM used in compliance with ISPM 15 and are used in the SEIS to refine the methyl bromide estimates to the extent possible. Mathematical equations, representative calculations, and descriptions of ISPM 15 compliance by country are described in detail in appendix E.

Most calculations used to determine the estimates of methyl bromide usage resulting from compliance with APHIS' WPM regulations in this SEIS rely upon U.S. Customs data related to import entries. None of the NPPOs in the various countries provided any data about the actual quantity of WPM relative to other packaging materials for their exports; therefore, the previous estimate (30 percent) used to determine the number of U.S Customs entries with WPM in the FEIS was applied to the present calculations when information about actual numbers of treated units or the total amount of methyl bromide were unavailable. There is some variability in the types of packaging material used worldwide; however, the earlier review of U.S. Customs entries investigated the packaging materials over a broad range of commodity import groups to ensure that the percentage accurately reflected the proportion of U.S. Customs import entries that use WPM.

The descriptions of treatment methods used by exporters in a given country were determined primarily from the information provided by the NPPOs of various countries about how they comply with ISPM 15. The effort to seek compliance data focused on those countries with larger trade

to the United States; however, information was sought for all major trading markets. The questions posed to these authorities were designed to ascertain the amount of methyl bromide fumigation in compliance with ISPM 15. Information was sought from the responding authorities regarding their usage of methyl bromide relative to their usage of heat treatment for compliance with ISPM 15, the manner in which such treatments are conducted, total methyl bromide usage where available, and any information about the quantity of WPM relative to other packaging materials. The NPPOs contacted by APHIS responded as part of their ongoing cooperation with APHIS to facilitate common trade interests. Previous information about phytosanitary trade issues from these sources has been reliable. Although some NPPOs were unable to provide detailed information for their respective country, the responses were sufficient for a thorough refinement of the earlier methyl bromide estimates.

1. Usage of Heat Treatment for WPM

Certain countries have specific requirements that limit their exporters to heat treatment or substitute packaging materials. This includes a number of countries in the European Union and closely associated countries. The European Union has indicated their intent to eliminate all methyl bromide fumigation where other alternatives or substitutes are available and acceptable from the standpoint of environment and health (Regulation of the European Parliament and Council, 2000). Some other countries treat WPM for export solely by heat treatment, most notably Thailand (Unahawutti, 2006). In recent years, the United States and Canada have been routinely treating WPM by heat treatment to eliminate pine wood nematode risk to meet phytosanitary requirements of the European Union and China. This practice of heat treatment of softwoods used in packaging materials has continued and has expanded to cover most WPM for foreign destinations. There is still, however, some fumigation of hardwoods with methyl bromide in the United States for use as WPM, but it is a relatively limited practice.

Specific country authorities provided information about their use of heat treatment in compliance with ISPM 15. The NPPO in Japan indicates that 90 to 95 percent of their WPM for export is heat treated (Kani, 2006). Although most WPM for export from Korea is heat treated, exports to Norway and Russia are usually fumigated with methyl bromide, according to the NPPOs in those countries (Kim, 2006). The NPPO in Chile, Marcos Beeche, states that 80 to 85 percent of their WPM for export is heat treated (Cohen, 2006). The NPPO in Taiwan indicates that almost all of their WPM for export is heat treated and use of methyl bromide, for this purpose, is expected to be totally phased out in 2010 or 2015 (Chen, 2006). Although Canada is not subject to USDA's WPM Rule, their packing industry is subject to compliance with ISPM 15-related regulations promulgated by other countries; therefore, the Canadian NPPO was also contacted to get compliance information. Canada has no

certification system for methyl bromide for exports of WPM; however, they do provide exporters with a phytosanitary certificate if fumigation with methyl bromide is the only alternative in specific situations (Thomas, 2006). Thus, Canada complies with ISPM 15 primarily through the use of heat treatment with limited fumigation allowed, as needed. Although Mexico was not initially subject to APHIS' wood packing rule, the requirements have been extended to Mexico separately (69 FR 165:52409–52419). The authority from the Mexican Forestry Health Office indicates that 92 percent of the WPM for export from Mexico is heat treated (Ramos, 2006).

As is evident from the responses received, those countries whose NPPOs responded to our recent request for information about compliance with ISPM 15 overwhelmingly indicated that heat treatment is the predominant treatment method used. There were several countries that lacked adequate data to respond to our questions about ISPM 15 compliance. In particular, Brazil has only collected data about overall methyl bromide usage, but not specific data for ISPM 15 compliance (Franz, 2006). China lacks data about overall compliance with ISPM 15 (Chou, 2006). The refinement of methyl bromide estimates for China in this SEIS relies upon data from a previous agency trip report (USDA, APHIS, 1999) that included visits to specific port and other treatment facilities of WPM in China. There is an ongoing agency effort to continue to get accurate information about the compliance of other countries with ISPM 15; however, meaningful responses from the NPPOs of those countries for documentation have not yet been received. For those countries that lack data about frequency of treatment method, the analysis applies heat treatment to half of the WPM and fumigation with methyl bromide to the other half of the WPM. Relevant information has been received for compliance from our most important trading partners. As other authorities respond to our request for information, the quantitative value of the methyl bromide estimates can be refined accordingly.

2. Usage of Methyl Bromide Fumigation

Although most calculations used to determine the estimates of methyl bromide usage resulting from compliance with APHIS' WPM regulations in this SEIS are based upon U.S. Customs data related to import entries, one country (Nicaragua) provided information specific to WPM. The response from the NPPO for the country of Nicaragua provided actual data that showed annual usage of 1,010.5 pounds for the first year of compliance with ISPM 15 regulations (Hernandez, 2006). Thus, the estimate for Nicaragua is based upon actual usage data.

The data for methyl bromide treatment of WPM for export from the United States is maintained by the National Wooden Pallet and Container Association (NWPCA). NWPCA tracks the number of WPM units that are fumigated each year. In calendar year 2005, the United States

fumigated 855,047 WPM units for this purpose (Deomano, 2006a). This NWPCA information is used in the determination of the cumulative methyl bromide estimates for the United States' compliance with ISPM 15. Unlike the available export data from NWPCA, comparable data about the number of WPM units fumigated with methyl bromide annually are not available for import entries to the United States; therefore, estimates for all countries, other than Nicaragua, are calculated using U.S. Customs entry data.

Although China has committed to eventually reduce their usage of methyl bromide (UNEP, 2003; Beijing Times, 2003, Mercado, 1999), the rate of reduction of this usage for treatment of WPM, over time, is likely to be tied to their propensity to continue to promote export trade. The original estimate for the China Interim Rule was based upon analysis of already loaded WPM and projected an estimate ranging from 1,040 to 12,565 MT per year (USDA, APHIS, 1998b). The comparable estimate for China, from the FEIS, was based upon analysis of WPM not already loaded and projected a range of 52 to 628 MT per year. Subsequent review of the information from a trip report (USDA, APHIS, 1999) to China suggests that some ports are complying exactly as the FEIS suggests and other ports are continuing to treat containers of WPM with already loaded cargo as had been projected in the analysis for the China Interim Rule. For example, the port at Tianjin requires the exporter to heat treat or fumigate WPM prior to loading of cargo. On the other hand, Shanghai permits fumigation either before or after cargo loading. At the ports of Guangzhou and Shenzhen, most of the WPM is fumigated prior to cargo loading; however, occasional fumigation of containers with loaded cargo occurs due to vessel departure constraints. Most fumigations in Shenzhen are conducted at company sites rather than at port facilities. There was no survey conducted at these company sites to determine the method of compliance with WPM regulations; therefore, no information is available about how the company sites in Shenzen fumigate packing material.

While data on overall production and consumption of methyl bromide have been reported to UNEP by China (NOAA et al., 2007; UNEP, MBTOC, 2007), it is unclear how much is applied to fumigation of WPM. The total methyl bromide production capacity of China's three producers was 7,620 MT in 2002, but only 3,175 MT were produced that year (BeijingTimes, 2003; UNEP, 2003). Recent response from the NPPO in China indicates their lack of any recent data compiled for the ongoing compliance with ISPM 15 (Chou, 2006). Based upon the information obtained from the 1999 trip report and more recent contacts, this supplement conservatively refines the methyl bromide estimates based upon treatment directly into already loaded containers. The methyl bromide resulting from China's compliance with APHIS' WPM rule, using this conservative approach in this SEIS, ranges from 2,027 to

6,188 MT per year. Relative to the 3,175 MT of methyl bromide produced by China in 2002 for all uses (Beijing Times, 2003; UNEP, 2003), this projected range for the methyl bromide estimate is clearly elevated. In the absence of more definitive information from the Chinese NPPO, the methyl bromide estimates in our documentation for China will remain uncertain and conservatively high.

3. Methyl Bromide Fumigation Methods

Information about the manner in which methyl bromide fumigation treatments are conducted in given countries was received from responses submitted by most of the NPPOs in those countries contacted by APHIS. The majority of the countries that responded and permit fumigation of methyl bromide in compliance with ISPM 15 report that those fumigations occur to the WPM prior to cargo loading. This includes responses from Canada, Chile, the Dominican Republic, Korea, Mexico, and Taiwan (Kim, 2006; Morales, 2006; Cohen, 2006; Chen, 2006; Thomas, 2006; Ramos, 2006). The majority of fumigation of WPM in Japan is applied to lumber before actual assembly of the wood packaging unit (Kani, 2006).

China is the only country where methyl bromide fumigation of loaded cargo is known to occur regularly. The predominant manner of methyl bromide fumigation for other countries that permit its usage occurs prior to loading of cargo. This is to be expected based upon the multiple factors discussed previously in the FEIS. However, for calculation purposes, in this SEIS, the application of analysis based upon fumigation of WPM prior to cargo loading is restricted to only those countries for which adequate compliance information is available. For conservative purposes, calculations for those other countries from which compliance data are lacking are subject to analysis based upon fumigation of already loaded cargo. Our inquiries to the NPPOs focused on those countries with the greatest trade with the United States (those countries with the most U.S. Customs entries); therefore, a considerable proportion (greater than 71 percent) of those entries from countries who permit methyl bromide fumigation are subject to analysis under the scenario for treatment of unloaded cargo.

In addition to the issue of actual treatment (including or excluding cargo), the method of fumigation does influence the quantity of methyl bromide needed for treatment. Although both chamber and tarp fumigations are used in the treatment of WPM, the decision was made to apply only tarp fumigations to the methyl bromide estimate calculations in the FEIS in the absence of complete data about the relative frequency of each type of fumigation. This approach results in conservatively high projections; however, it provides a reasonable approximation for the variability in treatment methods. More recently, we have learned that many Chinese exporters are using a unique and specific fumigation procedure that differs from the chamber and tarp fumigations used elsewhere. This procedure is

discussed in section III.A. regarding the estimates for the China Interim Rule. Rather than tarping containers, many of those Chinese shippers who were fumigating containers with already loaded cargo were conducting tests of those containers for airtightness, releasing methyl bromide directly into the closed containers, and sealing the entrance to those containers for fumigations.

The practice of fumigating containers with already loaded cargo without tarping results in considerably less usage of methyl bromide than occurs if those containers are tarped for fumigation. For example. the amount of methyl bromide required for fumigation of a sealed 40-foot container in China amounts to only 9.6 to 12.8 pounds as compared to 16.2 to 21.6 pounds for the standard tarp fumigation of the same container. Likewise, the amount of methyl bromide required for fumigation of a sealed 20-foot container in China amounts to only 4.8 to 6.4 pounds as compared to 9 to 12 pounds for the standard tarp fumigation of the same container. Although previous methyl bromide estimate calculations had not considered this factor, the refined assessment, in this SEIS, of the cumulative methyl bromide estimate for China applies their unique manner of fumigation for all methyl bromide projections.

The methyl bromide estimates for countries where compliance data are lacking use those values for the standard tarp fumigation with already loaded cargo for 20 to 40-foot containers, as cited above. The amount of methyl bromide used to treat WPM prior to loading varies with the amount of WPM. The previous estimate in the FEIS considered that the quantity of methyl bromide required for treatment of a given WPM unit before cargo loading would amount to about one-twentieth of that for loaded cargo. This amounts to a range of 0.45 to 1.08 pounds of methyl bromide per WPM unit for standard tarp fumigations of unloaded WPM. This approach is used to project methyl bromide estimates for those countries who indicate treatment of WPM occurs prior to cargo loading. Likewise, some exporters from China and Hong Kong have been fumigating unloaded WPM in chambers or containers. This amounts to a range of 0.24 to 0.64 pounds of methyl bromide per WPM unit for container fumigations of unloaded WPM.

Although we know that China does fumigate unloaded WPM at certain ports, such as Tianjin (USDA, APHIS, 1999), our estimates for China are based upon fumigation of already loaded cargo, as previously mentioned. On the other hand, the estimates for Hong Kong are based upon fumigation of unloaded WPM using the above method. Based upon records of U.S. Customs import entries, much of the cargo shipped from Hong Kong comes from southern parts of China, such as Guangzhou. These locations in southern China often move products by truck, and WPM treatment at Guangzhou occurs prior to loading for most shipments

(USDA, APHIS, 1999). This manner of fumigation is more representative of the treatments applied to WPM from Hong Kong and more accurately estimates actual usage.

In addition to the above approaches to methyl bromide fumigation of WPM, some WPM is constructed from wood that is fumigated prior to assembly. This is the manner of treatment that occurs in Japan (Kani, 2006). Although it is known that this approach uses less methyl bromide, the quantity used in construction of the WPM varies. Based upon review of methyl bromide treatments of other unmanufactured wood products, it is estimated that the methyl bromide usage for one container-sized treatment would cover 50 WPM units. This amounts to a range of 0.18 to 0.43 pounds of methyl bromide per WPM unit.

4. Other Fumigation Issues

The total quantity of methyl bromide emitted from a given fumigation is dependent upon the commodity being treated. In the absence of good studies on sorption, the calculations in the draft and final WPM EIS applied an estimated 80 to 100 percent release of methyl bromide from the fumigation enclosure during venting after a treatment was completed. Actual studies have been done by UNEP to analyze the amount of methyl bromide sorbed to various commodities (UNEP, MBTOC, 1998; UNEP, MBTOC, 2007). Durable commodities, like WPM, were determined to adsorb certain quantities of fumigant. The 1998 findings determined that the actual methyl bromide emitted from WPM and related commodities in fumigations amounted to a range of 69 to 79 percent of the total amount applied. This information was used in refining the methyl bromide estimates to more closely determine potential impact to ozone from fumigations of WPM in the draft SEIS. The more recent studies indicate that the percentage of methyl bromide emitted from durable commodities ranges from 76 to 88 percent of the total amount applied (page 16 of UNEP, MBTOC, 2007). This information was used to refine methyl bromide estimates in the final SEIS.

The potential reuse of treated WPM is known to influence the amount of treatment of WPM for trade. There are no hard figures for how much WPM is reused worldwide after cargo has been unloaded. We know from life-cycle studies that some WPM can be reused for 8 to 10 separate shipments before the wood is no longer durable enough to handle the loaded cargo (Deomano, 2006b). The United States does reuse treated pallets that meet ISPM 15 criteria and data are collected on how much WPM is reused. Review of the present rate of reuse in the United States indicates that one of every two WPM units is recycled and reused for shipping another load of cargo (Deomano, 2006b). Some countries are known to recycle more WPM than the United States. However, information about the actual rates of reuse by other countries is not readily available. Accordingly, we did not apply this information to any

refinements of the methyl bromide release model. By disregarding this issue in the quantitative analysis, our calculated figures overestimate the number of WPM units treated by 50 percent or more. The lower usage of methyl bromide associated with less frequent need to treat WPM is, therefore, not reflected in the present estimates of methyl bromide released or in any previous estimates in the FEIS or earlier documents. It is expected that greater treatment will occur with initial ISPM 15 compliance due to the lack of treated WPM already in circulation, but the frequency of need to fumigate will decrease with reuse. The lack of allowance for reuse in our analysis ensures that the methyl bromide estimates for initial compliance during the first year of enforcement are not understated, but the extended use of treated WPM could indicate overestimation for future years. As information related to this topic becomes available, continuing refinements of the methyl bromide estimates may be made in the future to more closely reflect actual usage.

Implications of the compliance methods required by individual countries on international agreements and changes to international agreements affect the pest risks and the usage of methyl bromide. Australia and New Zealand require all WPM to be debarked. This requirement increases the effective control of some pests from methyl bromide and heat treatments (Biosecurity Australia, 2006). The more rapid penetration of debarked wood, as compared to wood with bark, has not yet been suggested to justify changes to lower methyl bromide application rates, however, this topic may influence future regulations of WPM and other countries may require debarking of WPM to lower associated pest risks. It is also unclear how debarking affects emissions of methyl bromide upon venting.

Although U.S. trade with Australia and New Zealand is relatively limited, as compared to the global trade, this issue could be important if other countries choose to require debarking of WPM from foreign origins to meet their phytosanitary needs as well. ISPM guidelines are subject to ongoing changes as various countries negotiate to ensure phytosanitary regulations meet their need to protect plant resources. The present treatment schedule for methyl bromide fumigation, under ISPM 15, ranges from 3 to 4 lbs per 1000 cubic feet for 24 hours (FAO, 2006; IPPC Secretariat, 2005). Future changes to the treatment schedule may not increase the application rate or necessitate the need for more usage of methyl bromide; however, APHIS continues to track proposed revisions to ensure that the potential impacts of all revisions to the international guidelines are considered.

Some commodities are not marketable if fumigated with methyl bromide; some agricultural commodities lack a tolerance for bromine residues;

some commodities, such as leather, react with methyl bromide such that strong odors are imparted to the product; and, some commodities, such as electronics, may be damaged by reaction with methyl bromide and, therefore, methyl bromide fumigation of such commodities is not permitted due to the loss of product. This restriction on methyl bromide treatment limits fumigation of already loaded cargo to those commodities that can tolerate the chemical and residual effects of the treatment.

When the assumption is made that treatment of loaded cargo is the predominant method of fumigation in China, it is expected that the calculations from this assumption will overstate the methyl bromide estimate. This was clearly true for the early estimates made for the China Interim Rule, and is true for the present analysis where this assumption was applied to China and to other countries lacking information regarding the manner of their treatment methodology for ISPM 15 compliance. Although there is no detailed data available to support a precise estimate of methyl bromide usage in our model, this approach helps to ensure that underestimation of potential release of methyl bromide from fumigations for China and these other countries does not occur for these estimates.

World trade strongly influences how various countries comply with ISPM 15 guidelines. China continues to use methyl bromide fumigation of loaded cargo to help facilitate more rapid export of their cargo for trading purposes. The eightfold increase in U.S. Customs cargo entries from China from 1998 to 2005 shows their commitment to the promotion of trade with the United States. Although other countries are also increasing their world trade, the overall increase in U.S. Customs entries is 2.45-fold over the same time period. As is clear from those responses received by APHIS from NPPOs of these other large trading partners, their countries are relying on heat treatment rather than methyl bromide fumigation for compliance with ISPM 15, and their changes in trade are not dramatically affecting their usage of methyl bromide. Most countries have indicated that they plan to continue to decrease their usage of methyl bromide, particularly when there are effective alternate treatments available.

E. Impact Assessment of Refined Methyl Bromide Estimates

1. Adoption of the IPPC Guidelines (Proposed Alternative)

Refined methyl bromide estimates have been calculated using the methods described in appendix E and section III.D of this SEIS to more accurately reflect actual compliance with ISPM 15 and APHIS' Wood Packaging Rule. The findings presented in table 3–1 show the estimated methyl bromide associated with direct compliance with APHIS' rule to range from 822 to 2,351 MT annually. This estimate excludes the ongoing compliance by China and Hong Kong with the China Interim Rule, which

is included in the comparison of aggregate consequences in part 3 of this section. Since the implementation of this alternative on September 16, 2005, data for the compliance, under the IPPC alternative, have been collected and reviewed. These values are comparable to those presented on pages 67 to 68 of the FEIS (384 to 4,630 MT annually); however, as would be expected with better data, the range for the estimate is projected to be narrower. The broad range presented in the FEIS encompasses the more refined estimate in this supplement. That indicates that the initial projections in the FEIS were representative of the potential methyl bromide usage that has actually occurred for those countries in compliance with APHIS' wood packaging rule.

The effect on stratospheric ozone from the estimated 822 to 2,351 MT of methyl bromide released annually from fumigations of WPM can be estimated by using similar methodology to that applied in previous documents. However, just as there have been changes in WPM regulation compliance and trade that have affected usage, there have been changes in assessment methods as more information is gathered and there have been changes in the relative contribution of various ozone-depleting chemicals to the overall effects on the ozone layer as certain chemicals are phased out. The ultimate recovery of the stratospheric ozone layer is dependent upon the reduction in release to the atmosphere of many chemicals. Most of the primary ozone-depleting chemicals are presently regulated including many chlorofluorocarbons and bromines. However, many substances such as greenhouse gases that induce air temperature and circulation changes also affect the ozone layer. Heating of the troposphere and cooling of the lower stratosphere associated with these gases has affected the ozone layer, particularly by the enhanced ozone destruction observed seasonally in the polar lower stratosphere (page 5.1, NOAA et al., 2007). This variable is not factored into our assessment due to the present uncertainties over the regulation of greenhouse gases and the complex nonlinear effects that they cause to atmospheric temperature and ozone destruction in the stratosphere, particularly above polar regions.

Previous APHIS EIS documents have applied the results of analysis of potential impacts from policy options cited in 1998 Scientific Assessment (pages 18-19 of NOAA et al., 1998) to the assessment of potential effects on stratospheric ozone. The 1998 Scientific Assessment document indicated that "the equivalent effective chlorine loading above the 1980 level" could be decreased by "about 1% by eliminating the global production of methyl bromide beginning in 2004." This NOAA document explained the uncertainty that exists and the dynamic changes in the ozone layer associated with the phaseout of various anthropogenic sources of ozone-depleting substances (ODS). It should be remembered that the global consumption (not global production) of ODS releases the chemicals to the atmosphere and causes the depletion. Production may indicate

future usage, but it is not necessarily the best measure for potential impact. In particular, storage of methyl bromide for future usage has occurred periodically and consumption does not always mirror production. This analysis was based upon 1996 data that indicated 71,425 MT of global annual methyl bromide production and 63,960 MT of global annual methyl bromide consumption that year (UNEP, MBTOC, 1998). However, as a rough measure, the relative contribution of methyl bromide to the ongoing ozone depletion (1 percent above the 1980 level) did provide a basis for policy discussion and a means to look more closely at potential effects from different uses including QPS treatment of WPM.

Analyses comparable to the 1998 Scientific Assessment were presented in the 2006 Scientific Assessment (NOAA et al., 2007). Although the Executive Summary of this scientific assessment was released on August 18, 2006, this assessment was not released in its entirety until February 2007 after the draft SEIS had already been sent to printing, so its findings were not applied to the draft SEIS. The 2006 assessment analyzes effects from the hypothetical elimination of all emissions by the end of 2006. Based upon this, the comparable loading of methyl bromide (in equivalent effective chlorine units) above the 1980 level could be decreased by 5 percent by elimination of all production or all emissions. This is based upon 2005 data that indicated 37,923 MT of global annual methyl bromide production and 36,866 MT of global annual methyl bromide consumption that year (UNEP, MBTOC, 2007). The present assessment (in this final SEIS) uses the 2005 data (UNEP, MBTOC, 2007) released in February 2007 and the 2006 scientific assessment of that data (NOAA et al., 2007) published March 15, 2007 as the basis for the determination of relative effect on the stratospheric ozone layer of compliance with WPM regulations involving methyl bromide fumigation.

The relative loading or effect on stratospheric ozone for methyl bromide relative to the 1980 level shows an increase from 1 percent in the 1998 assessment to 5 percent in the 2006 assessment. This increase is a function of several factors including the reduction in effect from those ozone-depleting chemicals that are decreasing due to phasing out their usage, better understanding and modeling of ODS effects, and UNEP's refinement of the ozone-depleting potential of ODS including methyl bromide. The assessments prior to 2006 had projected long-term ozone changes based upon linear trends, but the phaseout of ODS by the mid-1990s required adjustments to the two-dimensional and three-dimensional models in the 2006 Scientific Assessment to more accurately reflect actual changes in stratospheric ozone that result from the non-linear changes in ODS burden that have resulted from the phaseout (page 3.5 of NOAA et al., 2007). It is also noteworthy that this increased percentage occurs during the same period of time when there is a 42 percent reduction in worldwide consumption of methyl bromide (63,960 MT in 1996 to

36,866 MT in 2005). This 2006 assessment projects conditions in the Antarctic stratosphere to return to those preceding 1980 by around 2065 (page xxxv, Executive Summary of NOAA et al., 2007). The assessment indicates a number of potential options for accelerating the recovery of the ozone layer by eliminating ODS production and consumption. The options are presented in Table 1 (page xxxvi, Executive Summary of NOAA et al., 2007) and include the 5 percent reduction associated with methyl bromide mentioned earlier in this paragraph. The accelerated recovery of the ozone layer from these table 1 options covers only a 49.2 percent overall increase in the ozone recovery, but is cumulative with those increases in ozone resulting from the reductions of other ODS that have already been phased out and that are projected to result in the pre-1980 levels by around 2065. This series of hypothetical projections is based upon the contention that the 1980 level of stratospheric ozone is the condition under which complete recovery has occurred. However, the 2006 Scientific Assessment in the first line of the summary on page 6.1 indicates that global ozone levels were already declining in the late 1970's due to anthropogenic releases of ODSs (NOAA et al., 2007).

As important as it is to reach a milestone like the ozone levels in 1980, it does not guarantee full recovery of the ozone layer. In fact, the further discussion of this issue on page 6.1 of the 2006 Scientific Assessment (NOAA et al., 2007) describes the effects of equivalent effective stratospheric chlorine (EESC) by saying that "the return of ozone to pre-1980 levels may not occur at the same time as the return of EESC to pre-1980 levels, and in fact may never occur because of changes in the atmosphere since 1980 that are not caused by ODSs." This is a reference in part to the increase in greenhouse gases responsible for global warming of the atmosphere that was discussed previously. Despite limits in the potential reductions of ozone depletion, the continuing phaseout of ODSs is contributing to stratospheric ozone recovery (page xxxv, Executive Summary in NOAA et al., 2007), and continued efforts to reduce usage of ODSs such as methyl bromide will benefit that recovery. It is, however, clear from review of the 2006 Scientific Assessment that the QPS uses of methyl bromide and uses of other ODSs which are not yet part of the worldwide phaseout are not the sole factors that need to be addressed to ensure complete recovery of the stratospheric ozone layer.

One factor in the long recovery period is the continued action of ODS compounds that have long half-lives. The chlorofluorocarbons have long half-lives in the atmosphere that contribute substantially to the long recovery period of the stratospheric ozone. Those ODS compounds with half-lives of 50 to 60 years are a primary factor in the projection of the long recovery of Antarctic stratospheric ozone to pre-1980 values by 2065. Unlike these ODS compounds which are likely to take 75 to 90 years for 75 percent reductions in their contribution to ozone depletion,

methyl bromide has a half-life of 0.7 year in the atmosphere (table 1–4 of NOAA et al., 2007). Methyl bromide, therefore, would be expected to have comparable reduction in effects upon stratospheric ozone within less than 2 years of phase-out due to its more rapid breakdown. As the stratospheric ozone layer recovers (the ppt of ozone approach the 1980 milestone level) and the phased-out ODS chemicals cease to persist in the atmosphere, the ozone depletion from the remaining uses (based upon this 1980 milestone) can be expected to constitute increasing percentages of recovery of stratospheric ozone. The percentage contribution of individual chemicals or cumulative contribution to ozone depletion from all remaining uses not phased out could exceed 100 percent recovery because the 1980 milestone includes allowance for some ozone depletion of natural origin and for a certain amount of ozone depletion from ongoing anthropogenic uses (levels before 1980) that the atmosphere is considered to be able to handle without adverse effects to the stratospheric ozone layer. Although alternatives to methyl bromide are continuing to be sought and there has been at least a 42 percent reduction in usage since 1996 based upon UNEP reporting, future anthropogenic usage of methyl bromide is anticipated to continue with gradual reductions after the non-QPS phaseout is completed for all countries by about 2015.

The 2006 Scientific Assessment as part of its models revises the global ozone depletion potential on a per-atom basis for bromine from 45 times as effective as chlorine (previous assessment in 2002) to 60 times as effective as chlorine (page xxxv, Executive Summary of NOAA et al., 2007). This factor results in an estimated 33 percent increase in ozone depletion associated with methyl bromide over that projected for previous assessments. Such corrections to their estimates are important to assessing potential risk outcomes that accurately reflect actual impacts. This factor has been subject to ongoing review and revision in each updated version of the UNEP scientific assessment, so it can be anticipated that future bases for ozone depletion potential may change again as more complete data are collected about the interactions of stratospheric gases. In that this corrected factor is included in the 2006 Scientific Assessment for the impacts of methyl bromide, the change is applied in this final SEIS which uses their most recent assessment as the basis for determination of effects on stratospheric ozone.

Based upon the 2006 scientific assessment finding (NOAA et al., 2007), the effect of methyl bromide usage in compliance with APHIS' wood packaging rule (822 to 2,351 MT) after 2006 is projected to pose a potential range of 0.1 to 0.32 percent effect on annual depletion of stratospheric ozone above the 1980 baseline (total recovery). The implementation of this alternative, as demonstrated in this risk analysis, is causing depletion of the ozone layer commensurate to that anticipated in the FEIS. Therefore, no substantial changes to impacts on human health

or to the environment are anticipated as a result of continuing implementation of this alternative. With the ongoing phaseout of most usage of methyl bromide (that are projected to contribute up to a 5-percent effect on stratospheric ozone annually above the 1980 baseline), the continuing usage from compliance with APHIS' WPM rule (which is less than one-fifteenth of the total methyl bromide usage) is more than compensated by the continuing overall reductions in usage.

Table 3–1. Summary of Estimated Methyl Bromide Released by Country/Region From Fumigations in Compliance With U.S. Wood Packaging Regulations Related to ISPM 15

Country	Total WPM Entries/Year	Estimated Methyl Bromide/Year (metric tons released)
Australia/New Zealand	67,656	1.05–5.83
Japan	742,134	2.3–12.8
Korea	219,699	1.7–9.5
Latin American Countries (excluding Nicaragua and Mercosur nations)	195,479	12–41
Mercosur Countries of South America	193,122	4.4–16.7
Nicaragua	9,369	0.35–0.40
Taiwan	377,858	5.9–33
Other SE Asian Countries	591,456	9.2–51
Other Countries*	3,399,539	785–2,181
Total	5,796,312	822–2,351

* Includes those countries for which compliance data are lacking and those countries strictly complying by heat treatment of wood packaging material.

2. Comparison of Methyl Bromide Estimates Among Alternatives

Alternatives considered in the EIS include (1) no action (no change in the current regulation), (2) extend the treatments in the China Interim Rule to all countries, (3) adoption of the International Plant Protection Convention's (IPPC) "Guidelines for Regulating Wood Packaging Material in International Trade," (the preferred alternative), (4) a comprehensive risk reduction program, and (5) substitute packing materials only. This section compares these alternatives based on the refined methyl bromide estimates generated from quantitative analyses in this WPM SEIS.

There would be no new mandatory methyl bromide usage under the no action alternative for WPM so this alternative involves no direct effects on methyl bromide usage per se. Therefore, the direct effects of the no action alternative involve no immediate increase in effects on stratospheric

ozone. However, those treatments associated with the China Interim Rule would continue. This continuing usage is part of the aggregate impacts of methyl bromide usage. The application rate required under the China Interim Rule is slightly higher than ISPM 15, so the projected methyl bromide estimate is elevated commensurate with the potential increased usage. Under the no action alternative, and based on the refined methyl bromide estimates, it is estimated that the potential usage of methyl bromide in China and Hong Kong would continue to range from 2,486 to 7,676 MT annually. The impact of this alternative above the 1980 baseline is projected to pose an annual 0.34 to 1.0 percent effect on stratospheric ozone. This issue is discussed further in the comparison of aggregate impacts in part 3 of this section.

Refined estimates were made for the alternative to extend those treatments used in the China Interim Rule worldwide. The estimated methyl bromide associated with compliance with this alternative ranges from 910 to 2,612 MT annually. This refined estimate is encompassed by the broader range determined in the FEIS (see page 62 of the FEIS) for the methyl bromide estimate (427 to 5,145 MT annually). The effect on stratospheric ozone from the estimated 910 to 2,612 MT of methyl bromide released annually from fumigations using rates applicable to the China Interim Rule is projected to pose a potential effect above the 1980 baseline of 0.12 to 0.3 percent on stratospheric ozone annually. This represents a slightly greater effect on the stratospheric ozone layer than was projected for the preferred alternative using APHIS' wood packaging rule, however, not a substantially greater impact. It is, nonetheless, best to select effective treatments that pose the least adverse environmental impacts, and APHIS' wood packaging rule poses less damage to ozone than would result from worldwide application of the China Interim Rule.

The comprehensive risk reduction program provides the maximum flexibility to select methods and treatments that are the most effective at eliminating all potential pest risks. Since a comprehensive risk reduction program uses a combination of methods, and it is unclear exactly how frequently specific methods will be selected, the potential environmental consequences vary considerably with the frequency of methods employed. It is not reasonable to speculate on the methyl bromide estimate with such potential variability. The potential human health and environmental consequences from this alternative are expected to be comparable to those described in the WPM FEIS.

Substitute packaging material that poses no potential risk of ozone depletion was considered in the FEIS as a possible alternative to WPM. This alternative would not require the use of heat treatment or fumigation with methyl bromide; therefore, any potential human health and environmental consequences as a result of heat treatments or treatment

with methyl bromide are not associated with this alternative. The worldwide implementation of this alternative would lower the release of methyl bromide from packaging material used in international trade.

3. Comparison of Aggregate Consequences of the Alternatives

The WPM FEIS did a qualitative review of aggregate consequences of each alternative. The aggregate consequences of methyl bromide usage in compliance with ISPM 15 relate to the cumulative impact of all usage associated with the guidelines. Cumulative impact, as defined in NEPA (40 CFR 1508.7), is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." Most of the potential cumulative impacts associated with ongoing methyl bromide usage for quarantine and other purposes were discussed in detail in the FEIS for the Importation of Mexican Unmanufactured Wood (USDA, APHIS, 2002a). That document determined that most anticipated future quarantine treatments are not expected to pose significant effects to the stratospheric ozone layer, but it did analyze the more substantial usage of methyl bromide from the pending regulations being contemplated for the regulation of WPM worldwide. The Mexican Unmanufactured Wood FEIS roughly analyzed this issue based upon the set manner of compliance as was initially anticipated for the China Interim Rule. The lack of compliance data resulted in a projected estimate that was intentionally conservatively high. We now have data about how countries are complying with ISPM 15, and a more refined aggregate assessment of methyl bromide estimates and impacts associated with global WPM regulations is presented here.

The cumulative usage of methyl bromide associated with regulations designed to meet the guidelines in ISPM 15 consists of methyl bromide usage from countries in compliance with APHIS' wood packaging rule, countries' compliance with the comparable regulations of other countries, and compliance of the United States with the regulations of these other countries. The previous section compares methyl bromide estimates for alternatives in regard to the direct compliance of other countries with APHIS' wood packaging rule. Comparable estimates have been prepared for those countries that were already subject to APHIS regulations under the China Interim Rule (China and Hong Kong), and methyl bromide estimates are made for those countries (including the United States) that are not subject to APHIS' regulations but must comply with the wood packaging regulations of other countries. These estimates for compliance with ISPM 15 guidelines are provided below in table 3–2.

The only country projected to have considerable usage of methyl bromide for compliance is China. The original China estimate for the China Interim Rule projected a methyl bromide estimate ranging from 1,040 to 12,565 MT annually (USDA, APHIS, 1998b). The reported 2002 total

Table 3–2. Summary of Estimated Methyl Bromide Released by Country/Region From Fumigations in Compliance With Wood Packaging Regulations Related to ISPM 15 That Are Part of the Aggregate Usage

Country	Total WPM Entries/Year	Estimated Methyl Bromide/Year (metric tons released)
Canada	3,526,952	27–76
China	2,698,237	2,232–6,893
Hong Kong	115,640	4.78–14.8
Mexico	1,942,521	24–67
U.S.A.	855,047 units fumigated in 2005	132–369
Total	9,138,397	2,420–7,420

methyl bromide production capacity of China's three producers was 7,620 MT; however, their actual production was only 3,175 MT for all uses (Beijing Times, 2003; UNEP, 2003). Although fumigation of WPM uses substantial amounts of methyl bromide, much of the usage reported in 2002 was for other uses, including preshipment and other quarantine treatments. Although some increased consumption has probably occurred between 2002 and 2005, the methyl bromide estimates (2,232 to 6,893 MT per year) determined in this SEIS for China are within the range of possible usage, but the upper tail of the distribution is probably high. Based upon this estimate the ongoing use in China is projected to pose a potential effect to stratospheric ozone above the 1980 baseline of 0.3 to 0.93 percent annually. The methyl bromide estimates for compliance of other countries with ISPM 15 are associated with considerably lower effects to stratospheric ozone than result from the compliance of China.

In assessing the overall cumulative impact, it is important to add all contributing sources of methyl bromide to those determined as direct impacts from the imposed regulations. The data for the United States estimate are based upon actual units fumigated with methyl bromide in 2005 and, thereby, provide a relatively accurate cumulative estimate. Estimates for the other countries are determined by using U.S. Customs entries. The data regarding methyl bromide estimates for Canada and Mexico pertain to their usage for export to other countries based upon information about their manner of compliance with ISPM 15.
The methyl bromide estimates presented in the previous section comparing alternatives (section III.D.2.) provide numerical estimates for compliance with APHIS' regulations and the China Interim Rule alternative; however, all these countries must comply with ISPM 15 regulations of countries other than the United States, as well as APHIS' wood packaging rule. The lack of reliable data about the amount of world trade among countries other than the United States and associated WPM

with that trade makes any cumulative analysis speculative and therefore, the aggregate methyl bromide estimates and effects for each alternative in this SEIS are limited to the relative effects of imports to and exports from the United States.

The aggregate methyl bromide usage associated with the no action alternative is equal to that of China and Hong Kong in compliance with the China Interim Rule. There would be no other methyl bromide usage in compliance with this alternative. The potential cumulative methyl bromide estimate for WPM treatment associated with the no action alternative ranges from 2,486 to 7,676 MT annually. This estimate is projected to pose potential effects to stratospheric ozone above the 1980 levels that range from 0.34 to 1.0 percent annually. The elevated estimate is the result of the manner of treatment applied to China compliance (fumigation of sealed containers after cargo loading) and the higher application rate of methyl bromide for the China Interim Rule. The upper end of the projections for all cumulative estimates are not realistic based upon reported production and consumption data from China. It is clear that the upper end of range is conservatively high. The potential aggregate impact of this alternative is lower because it includes only methyl bromide fumigations in China and Hong Kong. Consequently, cumulative human health and environmental consequences from methyl bromide usage under this alternative are slightly lower.

The aggregate projection of all methyl bromide estimates for compliance with ISPM 15 (preferred alternative), based upon the above described analytical reasoning (overall compliance with APHIS' WPM rule and reciprocal compliance by the United States), ranges from 3,191 to 9,628 MT per year. This estimate is projected to pose a potential effect on stratospheric ozone above the 1980 levels that ranges from 0.43 to 1.3 percent annually. The implementation of this alternative, as demonstrated in this risk analysis, shows potential depletion of the ozone layer commensurate to that anticipated in the FEIS. Therefore, no substantial changes to impacts on human health or to the environment are anticipated as a result of continuing implementation of this alternative. With the ongoing phaseout of most usage of methyl bromide (that has resulted in a 27,094 MT reduction in use of methyl bromide from 1996 to 2005), the continuing usage from compliance with APHIS' WPM rule is more than compensated by the overall reductions in usage that continue to occur.

The aggregate methyl bromide estimate for compliance with ISPM 15 (3,191 to 9, 628 MT per year) for 2005 can be compared to the figures reported by UNEP for treatment of WPM. Reporting of all QPS production of methyl bromide in 2004 amounted to 10,660 MT (page 12 of UNEP, MBTOC, 2007). The category for QPS treatment of wooden

packing materials was determined to account for 6.4 percent of the overall QPS usage or 679 MT. Reported production of methyl bromide for QPS purposes rose from 10,660 MT in 2004 to 13,815 MT in 2005, with the 3,155 MT increase attributed largely to implementation of ISPM 15 for treatment of wood packaging material (page 12 of UNEP, MBTOC, 2007). The association of this increase with WPM was discussed earlier in this SEIS and is tenuous due to reporting inconsistencies (see pages 13–14 of this SEIS). Combining the two rough UNEP totals gives an aggregate WPM usage of 3,834 MT annually. This usage value is towards the lower end of the range of the methyl bromide estimate (3,191 to 9,628 MT per year) determined in this SEIS, but reporting to UNEP by member countries is often incomplete or delayed as discussed previously. If one assumes that the complete implementation of compliance with ISPM 15 for some countries was delayed until 2006, then the reported consumption data to UNEP in 2005 may not reflect actual usage from complete compliance. However, most major trading countries were in compliance in 2005 and those countries did report usage to UNEP. Any increased annual usage in 2006 to comply with ISPM 15 is unlikely to exceed the upper aggregate methyl bromide estimate (9,628 MT) determined for ISPM 15 compliance in this SEIS.

The comparable aggregate projection for methyl bromide estimates in compliance with worldwide extension of the China Interim Rule, based upon this same analytical reasoning, provides a range of 3,443 to 10,698 MT per year. Similar issues of uncertainty to those expressed about the cumulative China compliance are also applicable here. This estimate is projected to pose a potential effect on stratospheric ozone above the 1980 levels that ranges from 0.47 to 1.5 percent annually. Although the aggregate impact from methyl bromide usage associated with this alternative is greater than for the preferred alternative, any potential impacts of this alternative would be counterbalanced in similar manner to that of the preferred alternative by the reductions in usage from the continuing phaseout of other uses.

Aggregate methyl bromide estimates are not prepared for the remaining two alternatives. As discussed in the comparison of alternatives section of this document, it is not reasonable to attempt to project an aggregate methyl bromide estimate for usage under the comprehensive risk reduction program alternative with the wide variability of methods. Further, the alternative use of substitute packaging materials involves no fumigation with methyl bromide.

(This page is intentionally left blank.)

Appendix A. Summary of the Public Comments on the Draft Supplement to the Final EIS

I. Introduction

The Animal and Plant Health Inspection Services (APHIS) thanks all who reviewed the "Importation of Solid Wood Packing Material Draft Supplement to the Final Environmental Impact Statement—February 2007" (draft SEIS) and provided their comments on this document. APHIS welcomes public involvement and considers public perspectives in its decision processes.

Copies of the draft SEIS were provided to the U.S. Environmental Protection Agency (EPA), Office of Federal Activities for their review and to announce availability of the draft supplement to the public. EPA prepared a notice of availability of the draft SEIS which included provision for a public comment period from March 9 to April 23, 2007 (March 9, 2007, 72 FR 10749, Docket No. ER-FRL-6684-7). Interested parties requested that APHIS extend the comment period to provide additional time for technical review in writing (see page 1 footnote of public comment sent from State of California) and verbally (EPA, Office of Federal Activities). APHIS granted an extension of the public comment period until June 25, 2007 (May 25, 2007, 72 FR 29294, Docket No. APHIS–2006–0152). The four public comments (including any attachments) that were received on the draft SEIS are available for review at the APHIS Reading Room and are reproduced in the third section of this appendix.

Although this supplement focuses on the estimates of methyl bromide usage, there are a number of other technical issues related to the regulations that were expressed in the comment letters submitted to APHIS. Those issues are addressed, along with the primary focus, to the extent that their potential environmental impact affects agency decisions to be made. Comments from individual respondents are addressed and summarized, as provided in 40 CFR 1503.4. The comment summaries are designed to concisely cover the issues and provide responses that clarify agency perspectives in the second section of this appendix. Numerical changes related to use of methyl bromide are discussed here as well as in changes to the text from the draft SEIS and changes in appendix E. Respondents' complete and corrected addresses are provided in the Distribution List, appendix F.

II. Summarization of Comments and Responses

For the ease of presentation and thoroughness of coverage, the issues from the comment responses are discussed in the order of their submission to APHIS and in the order of their occurrence within the individual comment. The four review comments, in order of their receipt by APHIS, were sent from the National Wooden Pallet and Container Association (NWPCA), the State of California Department of Justice (on behalf of three States and the Natural Resources Defense Council (NRDC)), NRDC, and EPA, Office of Federal Activities. With the limited number of responses received by APHIS, the topics are discussed focusing in greater detail on the technical issues within this SEIS to cover specific examples, where possible. Some references provided in response letters lacked complete citations for which APHIS made an effort to locate the source documents, but not all cited literature references could be located. The responses are complete to the extent that the analysts were able to find and review the documentation cited. To minimize repetition of information, reference is made to the discussion of topics in the text, in response to other comments, and to previous environmental documentation for the Rule.

A. National Wooden Pallet and Container Association

NWPCA's comment is generally supportive of APHIS review and decisions.

Comment: NWPCA states that the draft SEIS continues to suggest that substitute packing materials have fewer environmental consequences. This cited statement refers strictly to the environmental impacts from component control methods themselves, and also indicates in the last phrase that there are unquantified impacts from the manufacturing processes of substitute packing materials. The FEIS does a thorough analysis of environmental impacts of wood packaging materials and substitute packaging materials, including plastics. The FEIS does mention and provide reference to support issues including biodegradation, reuse, and recycling; however, this comment does raise additional issues not covered in the FEIS with specific regard to environmental impacts from the use of substitute packaging material including fire hazards of plastics versus wood packaging materials, and reduction of pest infestations in wood packaging materials since the adoption of the new pest elimination standards imposed by the industry.

Response: Although the new information presented in their comment regarding environmental impacts is valid, the associated impacts further justify APHIS' analyses in support of this rulemaking. In that the scope of

the SEIS is limited to the refinement of methyl bromide estimates, further assessment of these other impacts is not presented.

Comment: NWPCA suggested to APHIS a domestic standard for wood in response to infestations of EAB and Sirex wood wasp. NWPCA suggested to USDA that all new or repaired wood packaging materials be treated, which would become a domestic standard compatible with international requirements.

Response: APHIS appreciates the interest of NWPCA in pest risk reduction of WPM for domestic use; however, this suggestion is beyond the scope of the SEIS and would most appropriately be addressed in a separate rulemaking specific to such an action.

Although NWPCA states that "any suggestion or implication that substitute packing materials are environmentally advantageous for eradicating invasive species is totally unacceptable, impractical, and contrary to harmonized international law," assessing the environmental impacts of all reasonable alternatives associated with this rulemaking is required to fulfill the requirements of NEPA.

B. Comments from the California Attorney General's Office, Illinois Attorney General's Office, Connecticut Attorney General's Office, and NRDC

Response: Contrary to the perspective expressed in the first sentence of this comment letter, APHIS had reviewed and applied considerable factual information in the preparation of the original estimates of methyl bromide fumigation usage. All information provided in the SEIS is supported by credible and peer reviewed sources that are referenced in the document. All credible sources of pertinent information relevant to the scope of the SEIS at the time of preparing the document were incorporated and utilized to support discussions and claims made within the document.

Preparers of the SEIS are aware of the fact that the 2006 Scientific Assessment (NOAA et al., 2007) was finalized and released to the public in February, shortly after the draft SEIS was published; thus, the UNEP document was not available as a source for the draft SEIS. However, the findings of this UNEP document are discussed and referenced in the final SEIS.

The development of methods to apply the factual information to estimates of methyl bromide has occurred over a number of years and was discussed in some detail on pages 11 to 15 of the draft SEIS. Independent of how much data was applied to the analysis of the original regulation, the determination of how much usage occurs from a given method (relative to

other available methods) was expected to be uncertain until compliance data were available from the industry and for those countries subject to quarantine requirements. The monitoring of compliance with a given regulation is part of the ongoing regulatory process that allows APHIS to review and revise risk reduction strategies. This compliance monitoring involves collecting information that can be applied to supplement previous documentation when previous data are limited. This is exactly what the SEIS does in its reevaluation and refinement of the methyl bromide estimates of the use in treatment of wood packing material. The long-term resolution to the pest risk problems associated with wood packing material referred to on page v of the final EIS requires establishment of a baseline level of phytosanitary protection from which to determine the need for further refinement of wood packing material regulations. Therefore, the SEIS constitutes another step in the ongoing review process at APHIS to develop a long-term resolution of the pest risks associated with wood packing materials.

Response to Further Comment: Although ALB is a quarantine wood pest that was introduced on Staten Island near port facilities, the fact that the source (e.g., port, natural spread, human movement of wood from adjacent infestations, or hitchhiking beetles) of this introduction is unknown makes it a poor justification that a more effective alternative than treated WPM should be required. The suggestion that APHIS could have prevented the introduction of ALB on Staten Island by promulgating different regulations requires assumptions about the movement of ALB that have not been substantiated.

1. Point 1

Comment: In its first point, the comment letter claims that APHIS "improperly hides the environmental impacts of the increased methyl bromide use for fumigation by combining it with the potential reduction of methyl bromide for other purposes."

Response: The data for methyl bromide estimates and environmental impacts from the wood packing regulation and each alternative were clearly presented on pages 24 to 30 of the draft SEIS. The effects are assessed independent of the other potential reductions in methyl bromide use that have occurred as a result of the phaseout. The direct impact of the Rule (from page 32) is projected to result in methyl bromide usage of 822 to 2,351 MT annually that poses a potential range of 0.1 to 0.32 percent effect on annual depletion of stratospheric ozone above the 1980 baseline.

The 42 percent reduction (27,094 MT) in worldwide consumption of methyl bromide over the last 10 years, from 63,960 MT in 1996 to 36,866 MT in 2005, shows the effectiveness of the ongoing overall phaseout of methyl bromide (UNEP, MBTOC, 2007). It is clear that the projected increases in usage of methyl bromide from the Rule do not increase usage to the extent that the usage is reduced by the phaseout. If

one combines cumulative data for methyl bromide production associated with all wood packing material, as reported by UNEP (pages 13 to 14 of this SEIS), the total worldwide usage of methyl bromide attributed to WPM in 2005 amounts to only 3,834 MT annually. This WPM application clearly involves less increased usage than the 27,094 MT reduction related to the phaseout; however, the impact to the stratospheric ozone from such continuing usage should not be interpreted to be negligible. Nonetheless, it is clear that the relative contribution to the overall impact on the ozone layer is greater from other uses of methyl bromide and uses of other ozone-depleting substances.

Comment: Also, the first point suggests that the impact of other changes in use of methyl bromide and other ozone-depleting substances not associated with wood packing material need not be considered in the determination of impacts to overall stratospheric ozone in this EIS.

Response: The cumulative impact analysis under NEPA requires consideration of the influence of these other ozone-depleting substances on the stratospheric ozone layer. The selection of the 1980 level of stratospheric ozone as the baseline for full recovery of the ozone layer (NOAA et al., 2007; UNEP, MBTOC, 2007) is a worthy milestone; nevertheless, it does not guarantee full recovery of the ozone layer. The 2006 Scientific Assessment in the first line of the summary on page 6.1 indicates that global ozone levels were already declining in the late 1970s due to anthropogenic releases of ozone-depleting substances (NOAA et al., 2007). Although this same document projects conditions in the Antarctic stratosphere to return those preceding 1980 by around 2065 (page xxxv of the Executive Summary of NOAA et al., 2007), that projection does not take into account the potential options for accelerating or hindering the recovery of the ozone layer (including phaseouts of QPS usage of methyl bromide and other presently unregulated uses of ozone-depleting substances) shown in their table 1. Independent of the milestone selected for the ozone layer recovery, use of other ozone-depleting substances will either increase or decrease effects to stratospheric ozone. Pages 29 to 32 in this final SEIS discuss the limitations of this type of projection. The aggregate methyl bromide estimate for all compliance with ISPM 15 determined in this SEIS ranges from 3,191 to 9,628 MT annually (see page 37).

As indicated in the previous paragraph, the determination of effects on ozone are calculated relative to the 1980 baseline for stratospheric ozone levels. As other ozone-depleting substances are phased out and degrade (including some substances with long half-lives), the elimination of the remaining uses will be associated with increasingly greater potential to recover the remaining ozone to the 1980 baseline level, so the potential effect as a percentage is subject to change over time, particularly as the impacts of the phaseout increase the stratospheric ozone levels. This

indicates that the potential effect on stratospheric ozone from the same usage of methyl bromide this year as in the previous 10 years would contribute to a higher percentage of depletion above the 1980 baseline than previously. The UNEP Scientific Assessments of Ozone Depletion continue to track the recovery and science of ozone depletion. The Executive Summary for the WHO/UNEP "Scientific Assessment of Ozone Depletion: 2006" was released August 18, 2006; however, the entire assessment, including supporting chapters (NOAA et al., 2007), was not available until February 2007. The draft SEIS was in the process of being printed in February at the time of release of their complete assessment; consequently, the complete information was not available to update the draft SEIS. However, APHIS has since recalculated impacts in the final SEIS to account for the determined 33 percent increase in effectiveness (from 45 to 60) of bromine relative to chlorine in global ozone depletion potential on a per-atom basis. In addition, other refinements to the calculations from this scientific assessment and from the 2006 UNEP, MBTOC assessment (published March 15, 2007) were made to update the methyl bromide estimates and their potential impacts based upon the present state of the ozone layer. Based upon the above discussion, it is anticipated that further refinements will continue as the science improves and recovery of the ozone layer progresses.

2. Point 2

Comment: The second comment suggests that the incomplete compliance data precludes the ability of APHIS to reach a viable conclusion.

Response: It is noteworthy that APHIS had considerably less data upon which to base their risk calculations and environmental assessment at the time of the China Interim Rule and other previous wood regulations than we have now. Appendix E of the final SEIS has been expanded to clarify methods and the compliance data reported to APHIS. The calculations have consistently been designed to avoid underestimation of methyl bromide usage, and the reporting that has been submitted to UNEP has been within or below the range determined by our calculations. In the assessment of China in the draft and final SEIS, the analyses intentionally selected the fumigation of already loaded cargo as the treatment for calculations to ensure that the methyl bromide estimate was not underestimated for this country. In addition, it adjusted the analysis to account for their practice of sealing containers for fumigation rather than tarping containers that is more conventionally practiced elsewhere. Knowledge of this practice in China would not have been determined if APHIS did not continue to monitor their compliance and seek more complete information about their methyl bromide usage during the last few years. This practice was discussed on pages 20 to 21 of the draft SEIS and is discussed on page 24 of the final SEIS.

The reported methyl bromide consumption from China to UNEP in 2005 (table 3.13 on page 53 of UNEP, MBTOC, 2007) amounted to 841 MT for regulated uses, so a noteworthy amount of their consumption is not used for QPS. Of the 13,815 MT of methyl bromide used for QPS worldwide in 2005, only 978 MT of methyl bromide are estimated to be used for durable goods such as wood packaging material (table 3.15 on page 57 of UNEP, MBTOC, 2007). The projected methyl bromide estimates for wood packing material for China in the final SEIS range from 2,232 to 6,893 MT which exceeds the UNEP data by a substantial margin. From the usage reported to UNEP, there is no clear basis to suggest that substantially greater usage occurs through imports or remaining stock. The total production of methyl bromide in 2005 was 37,923 MT (table 3.2 on page 31 of UNEP, MBTOC, 2007); however, the overall consumption was 36,866 MT of methyl bromide in 2005 (page 57 of UNEP, MBTOC, 2007). This indicates only about 1,000 MT not consumed in the same year as production. This is comparable to remaining stocks from other recent years. The reported quantities do not suggest that large stocks or imports are being used to meet ISPM 15 in China.

The final EIS, on page 16, discusses inspections of WPM and the results of monitoring. APHIS, in its consideration of the China Interim Rule, took into consideration the existence of some fraudulent certification by focusing early inspection on WPM from China. The compliance study in 1998, cited on page 16 of the final EIS, found China to lack treatment in only 0.7 to 0.9 percent of the shipments and incorrect treatment in only 0.05 to 0.2 percent of the shipments. Although comparable studies have not been reported for more recent years, there is no inspection data to suggest that their compliance has either improved or declined.

Other than compliance since the China Interim Rule, the final SEIS has a lack of compliance data for 65 other countries that account for about 3.6 percent of the U.S. Customs entries in 2005. This list, along with the compliance information for other countries, are described in part of appendix E of the final SEIS. Fumigation of WPM from these countries is assumed to occur by tarping containers with already loaded cargo. As with the China calculations, this results in a conservatively high estimate for methyl bromide for these countries. The remainder of the countries that export to the United States have either provided complete information about their manner of compliance or sufficient data were available regarding their compliance provided by them or from UNEP reporting to prepare an informed analysis.

3. Point 3

Comment: The third comment suggests that APHIS, in the draft SEIS, precludes substitute packaging consideration.

Response: On page 5 of the draft SEIS, it states, “In accordance with applicable international agreements, APHIS does consider in its

regulations governing phytosanitary issues in trade if those measures are transparent, technically justified, and no more restrictive of trade than necessary to achieve an appropriate level of phytosanitary protection. …Should it become evident that the usage of methyl bromide fumigation in the treatment of WPM is no longer needed by developing countries in order to meet phytosanitary requirements (due to increased availability of substitute packaging materials and other treatment measures in all affected countries), and that the elimination of methyl bromide fumigation is 'not more trade restrictive than required to achieve [an] appropriate level of sanitary or phytosanitary protection,' as is specified by provisions of the Sanitary and Phytosanitary Agreements of the World Trade Organization, then APHIS will consider further rulemaking for WPM (e.g., substitute packaging). Thus, the claim made in the above stated comment inaccurately suggests that APHIS interprets "no more restrictive" to mean that the usage of an alternative method must be widespread for a switch to be permitted.

As stated in the text on page 5 of the draft SEIS (and quoted above), APHIS considers any alternative (including substitute packaging) for regulation presented in this rulemaking to be "more trade restrictive" if it is not feasible for equitable implementation in all countries and particularly for those developing countries whose trade could be restricted by the implementation. Further, the costs of the alternative limited to substitute packaging materials (e.g., plastics) in these developing countries are likely to exceed those in developed countries due to costs of importing the raw materials for manufacturing or of those packing materials already constructed.

Contrary to the view that APHIS can impose any regulations that it wants, the IPPC requires that new regulations be technically justified first. The quarantine pests (bark beetles) of concern to Australia and New Zealand do not necessarily mirror those of concern to APHIS, nor do their methods necessarily achieve the same level of phytosanitary protection for every country. The Australian Quarantine Inspection Service has not yet submitted their technical justification for required debarking. In the absence of their technical justification, the NPPOs of other countries are not obligated to apply the more stringent applications proposed.

The scope of the draft SEIS was to reevaluate and refine the methyl bromide estimates from the FEIS. The refinement of methyl bromide estimates was initiated because of the availability of new information, and this refinement was promised in the FEIS. The assessment of the alternative to phaseout methyl bromide and adopt the use of alternative packaging materials has not changed substantially. The lack of definition for the phaseout/phase-in period, suggested from comments, show the limited basis available for regulatory decisionmaking. Cost aspects related to this rulemaking were thoroughly assessed in the associated regulatory

impact analysis (USDA, APHIS, 2004). The fact that substitute packing materials make up only about 5 percent of the U.S. market for packing materials (FEIS on pages 41 and 80) and plastic pallets only comprise 8 percent of the European pallet market indicates that such materials are not and, for the foreseeable future, will not be the dominant share of the market in developed countries, let alone developing countries. It is to the benefit of industry groups, such as RPM Technologies, to provide optimistic projections about future market share to their customers and stockholders; however, sound decisions for enforceable regulations require consideration of all information, including contrary information from the wood packing industry (see public comments from NWPCA). Many developing countries still depend on wood packaging materials for pallets due to the low cost and accessibility of wood. Thus, the assumed increase in plastic pallet market share and use is not sufficient to suggest that plastic pallet use should be adopted as standard packaging material worldwide, because it is not a feasible alternative for many nations.

4. Point 4

Comment: The fourth comment states that the draft SEIS did not adequately identify and discuss the worldwide and collateral effects of the WPM rule. The comment indicates a lack of satisfaction with the point in time estimates referred to in the draft SEIS at page 11.

Response: Information was sought by APHIS for methyl bromide usage and methods of treatment from NPPOs of certain countries. Conservative estimates were used to account for information that was not available for some countries. The SEIS does make reference to and incorporates the increase of trade since the FEIS into its refined methyl bromide calculations. The draft SEIS states, on page iv of the Executive Summary, that "although the refined estimates determined for this supplement more accurately portray the range of methyl bromide used for ISPM 15 compliance than previous estimates, the dynamic nature of trade and compliance with trade-related regulations result in the ongoing need for review because this information reflects only the most recent information received. The availability of information about compliance by exporters in some countries is still lacking, and for these countries, this supplement applies conservative assumptions designed to err in favor of overestimating their methyl bromide usage." Thus, the draft SEIS takes into consideration the issues mentioned in this comment and addresses them in the document appropriately.

It is noteworthy that other analytical documents making projections use data for specific points in time for their projections. For example, the 2006 Scientific Assessment of Ozone Depletion selected the end of 2006 as their point for projections of elimination of emissions from ozone-depleting substances (page xxxvi of NOAA et al., 2007). No effort was made by the UNEP scientists to quantitatively speculate on how anthropogenic use will or will not change with human activity after 2006,

so it is likewise not appropriate for the SEIS to attempt to estimate future anthropogenic use beyond present data.

Comment: The comment also expressed concern with the discussion of collateral impact analysis, as mentioned on page 29 of the draft SEIS.

Response: As was indicated in the draft SEIS at page 29, "The lack of reliable data about the amount of world trade among countries other than the United States and associated WPM with that trade makes any cumulative analysis speculative and, therefore, the aggregate methyl bromide estimates and effects for each alternatives in this SEIS are limited to the relative effects of imports to and exports from the United States." If one looks at the cumulative data for the methyl bromide associated with all wood packing material as reported by UNEP (MBTOC, 2007) and discussed on pages 13 to 14 of this SEIS, the potential annual worldwide usage amounts to 3,834 MT in 2005. Comparing this figure to the conservative aggregate projection in this SEIS (3,191 to 9,628 MT per year) indicates that the additional usage by other countries is covered within the overall range projection. For export from countries such as South Korea, there was usage allowance projected to account for uncertainty (see table 3–1).

5. Point 5.

Comment: This comment suggests that APHIS did not provide adequate information to make a fair assessment of the accuracy of methyl bromide estimates.

Response: The draft SEIS, on pages 17 to 22, provides questions asked of foreign NPPOs, their responses for methyl bromide and heat treatment usage, their method of application to wood packaging materials, and the country that the information represents. The information obtained from foreign NPPOs was used to refine methyl bromide estimates in the draft SEIS. For uncertain information and/or in the absence of more definitive information from NPPOs, estimates in the draft SEIS remain conservatively high.

In the draft SEIS at page 25, a footnote in table 3–1 states that the "Other Countries" refers to "those countries for which compliance data are lacking and those countries strictly complying by heat treatment of wood packaging material." To assist the reader, the countries are listed by category in appendix E of the final SEIS. "Other Countries" consists of the 139 countries reported to only heat treat WPM or use substitute packing material, and the 65 countries lacking compliance data and assumed to fumigate with methyl bromide. The percentage of U.S. Customs entries in 2005 is also provided for each category.

As mentioned in the draft SEIS at page 18, "unlike the available export data from NWPCA, comparable data about the number of WPM units

fumigated with methyl bromide annually are not available for import entries to the United States so estimates for all countries other than Nicaragua are calculated using U.S. Customs entry." There is no evidence to suggest that U.S. Customs data are lacking reliability or accuracy. Further the U.S. Customs entry data is collected for all entries and no change in the collection of that data has occurred. The general import data are not collected by Agricultural Specialists/Inspectors at the U.S. Customs Service, so the cited reference to vulnerability from foreign pests and diseases pertaining to agricultural specialists does not relate to the collection of overall import data contrary to the statement in this comment provided.

Comment: This comment questions the variation of methyl bromide production and consumption data between the draft SEIS and that cited by MBTOC and UNEP.

Response: The variation in data is expected because the years of data referenced in the comment are between 5 and 8 years old and much has changed in methyl bromide production and consumption since that time. Further, the MBTOC data, cited in the comment, includes all QPS uses, as opposed to the draft SEIS, which limited methyl bromide estimates to wood packaging material only. Thus, the difference in methyl bromide usage relates to different overall uses. As was discussed previously on pages 13 to 14 of this SEIS, the methyl bromide production (UNEP, MBTOC, 2007) indicates 3,834 MT in 2005. This compares favorably with the aggregate methyl bromide range estimate from 3,191 to 9,628 MT per year in this SEIS.

Comment: "APHIS further fails to account for potential increase in usage based on the limited efficacy of the current methyl bromide fumigation schedule."

Response: This comment assumes that the expressed concern of the IPPC contracting parties that the methyl bromide treatment schedule did not achieve the desired reduction in pest risk was a result of "APHIS' estimates." It is stated on page 6 of the draft SEIS that the only IPPC approved revision since the initial methyl bromide fumigation treatment schedule of Annex I of ISPM 15 was to change the proposed minimum time required to maintain concentrations of methyl bromide within the fumigation enclosure. Discussion of the lack of change in dosage rate indicates that methyl bromide usage would not change. The revised treatment schedules are designed to eliminate pest risk without the need for additional usage of methyl bromide. The FEIS, on pages 64 to 66, discusses the capacity for pest mitigation of ISPM 15 relative to other alternatives and this issue is not revisited in the SEIS.

6. Point 6

Comment: The sixth comment suggests that APHIS makes no attempt to account for or estimate possible fraud in reporting, especially from China. This comment assumes that a high estimate for China, in the draft SEIS on page 19, must mean that there is massive fraud in reporting. This comment presumes that some shippers are not treating rather than some are treating prior to loading or heat treating.

Response: Although one can use any of several speculations on the manner of or lack of compliance with ISPM 15, the draft SEIS was prepared to make reasonably accurate usage estimates for methyl bromide and not review the compliance history. The issue of fraud in reporting, especially from China, was covered in the WPM FEIS on page 16 under this issue of compliance. Further, compliance with recycling and repair does not automatically mean lack of proper treatment.

C. Natural Resources Defense Council

Comment: NRDC suggests that APHIS has not regarded the methyl bromide estimate as related to their rulemaking.

Response: The estimates of methyl bromide usage have been an integral part of every EA and EIS that has been prepared for agency applications of this fumigant. APHIS does not consider reevaluation and refinement of previous estimates to be a trite exercise, but seeks to continue to improve on the previous risk assessments. In those import regulations where there are more than one available means to fulfill treatment requirements, there will always be uncertainty about how the exporters from other countries will decide to meet those requirements. APHIS is primarily concerned that the decision can be informed in regards to potential risks from each treatment method or alternative, and there is no evidence that previous documentation was not adequate.

1. Risk to the Ozone Layer

Comment: The draft supplemental EIS does not reflect current scientific information on methyl bromide's risk to the ozone layer.

Response: As was pointed out in a previous comment response, the draft SEIS was prepared at a time when only the UNEP Executive Summary (released August 18, 2006) was available; however, the entire assessment, including supporting chapters (NOAA et al., 2007), was not released until February 2007 when the draft SEIS was at print. Therefore, the draft SEIS did not have the complete information from which to adjust its analyses. However, APHIS has since recalculated the estimates and impacts in the final SEIS based upon this document and other more recent publications.

As was pointed out in our response to earlier comments, the percentages cited by UNEP relate to their selection of the 1980 level of stratospheric ozone as the baseline for full recovery of the ozone layer. Conditions in

the Antarctic stratosphere are projected to return to those preceding 1980 by around 2065 (page xxxv of NOAA et al., 2007). As other ozone-depleting substances are phased out and degrade or are removed from the atmosphere, the level of stratospheric ozone will increasingly approach the 1980 baseline level. The remainder of ozone-depleting chemicals in use will either delay the recovery to that level or prevent recovery to higher concentrations than in 1980. There was clear evidence that global ozone levels were already declining in the late 1970s due to anthropogenic releases of ozone-depleting substances (page 6.1 of NOAA et al., 2007). Just as the previously cited 1-percent effect from methyl bromide is presently outdated, the percentage reductions cited in table 1 will change as recovery of the ozone layer occurs, and better understanding of the atmospheric science occurs. Those reductions in table 1 are cited as potential options for accelerating the recovery of the ozone layer to 1980 baseline levels (page xxxvi of NOAA et al., 2007). The reductions would occur in addition to the recovery that is already projected from the phaseout of other ozone-depleting substances. Based upon current understanding, the percentages in reduction cited in table 1 will increase commensurate with any increases in stratospheric ozone from the present phaseout until full recovery of the ozone layer occurs (1980 baseline levels of ozone are reached), and will decrease commensurate with any decreases in consumption of the compound or compound group until complete phaseout occurs. Table 1 reductions are only related to a hypothetical end to production and emissions after 2006; however, the numerical determinations in the table do provide a good snapshot of the overall impact from methyl bromide usage.

It must be kept in mind that the impact from use of some ozone-depleting compounds extends for long periods after their use has ceased due to long half-lives in the atmosphere. The half-life of methyl bromide is relatively short (0.7 year) and the benefits to ozone recovery (5 percent cited in table 1) from phaseout would occur within a few years; however, other reductions in use of ozone-depleting substances do not necessarily result in such rapid removal from the atmosphere. In theory, recovery of the ozone layer should occur by 2065 with or without further restrictions on unregulated uses. However, “the return of ozone to pre-1980 levels” by 2065 is not certain due to changes in the atmosphere since 1980 (page 6.1 of NOAA et al., 2007). The influence of global warming agents and other compounds on atmospheric conditions creates uncertainty about the rate and time required for recovery of ozone from the various scenarios considered by UNEP. APHIS does discuss and consider this information in the text of the final SEIS.

2. Increasing QPS Methyl Bromide Production Driven by ISPM 15

Comment: This comment suggests that the primary factor in increased QPS production relates to compliance with ISPM 15.

Response: In using reported information, one must take care in placing weight on numerical figures. Although the UNEP, MBTOC report (2007) at page 58 attributes the increased consumption of methyl bromide in 2005 for QPS usage largely to compliance with ISPM 15, some uses reported to UNEP were reclassified by EPA as QPS for the first time in 2005 (see pages 13 to 14 and 37 of the final SEIS). In particular, the QPS reporting by the United States in 2005 reclassified some critical use exemptions as QPS based upon export preshipment requirements. This amounted to inclusion of an additional 1,209 MT of methyl bromide (which in previous years was part of critical use exemption reporting) listed as QPS in their 2005 reporting to UNEP (EPA, OPP, 2005). This 1,209 MT increase in QPS reporting by the United States in 2005 for articles other than WPM could account for over one-third of the total increase in QPS cited by UNEP (3,155 MT). Such changes in classification for reporting purposes by various countries may even account for more of the increased reporting. Although it is reasonable to expect some increased usage of methyl bromide to comply with ISPM 15, the UNEP document does not clearly break down how much increase related to different categories of QPS in 2005. Their reporting has not required reporting the breakdown of QPS by category. However, many countries were complying with ISPM 15 in 2005 and those countries using methyl bromide to treat wood packing material would be expected to report greater usage of methyl bromide to UNEP. Combining the quantity of methyl bromide associated with wood packing materials in 2004 (679 MT determined from page 12 of UNEP, MBTOC, 2007) with the 3,155 MT attributed to WPM in 2005 gives a total amount of 3,834 MT annually. This amount could be adjusted for the U.S. changes in reporting in 2005 to amount to 2,625 MT annually. However, when the effort is made to account for all such changes, the association between numerical changes and specific uses is not clear. The aggregate methyl bromide estimate for compliance with ISPM 15 in the final SEIS (page 37) ranges from 3,191 to 9,628 MT per year. The UNEP numbers are not outside this projected range if one anticipates some increased usage in 2006 as additional countries comply with ISPM 15; however, there is no reason to assume that such increases would continue, particularly when most countries are not showing preference for fumigation with methyl bromide over the use of heat treatment or substitute packing materials. To establish a clear trend in usage, the data need to be specific to methyl bromide treatment of WPM, and the occurrence needs to be based upon more than one data point. Any long-term trend can not be established from the present data of UNEP or is at best tenuous.

The revised methyl bromide schedule was discussed briefly in the draft SEIS on page 6. Reference is made to the anecdotal evidence of

increasing the initial methyl bromide charge cited by UNEP (MBTOC, 2007) in the final SEIS. Any effects from this occurrence and the retreatment, in places like Australia, should become evident in future reporting to UNEP. The indication of under-representation of wood products as a proportion of QPS fumigation (page 287 of UNEP, MBTOC, 2007) seems reasonably likely, given the other reporting problems described above and in the text. Reported amounts are less than our methyl bromide estimates, so such statements indicating under-representation of reported use of methyl bromide for wood products to UNEP are consistent with our analysis.

APHIS is continuing to work with other countries to develop methods that are compatible with their packing needs as part of coordination with other countries through the International Plant Protection Convention (IPPC). It is desirable for those less developed countries and smaller WPM companies using methyl bromide to convert over to heat treatment or use substitute materials in their compliance. APHIS is committed to work with the IPPC on decreasing pest risk in packing materials in a manner that lowers other environmental impacts. Part of this commitment involves working on a draft International Standard for Phytosanitary Measures (ISPM) for "Developing A Strategy To Reduce Or Replace The Use of Methyl Bromide for Phytosanitary Purposes." This standard has been under review since June 2007 by the contracting parties to the IPPC.

3. Inconsistent and Missing Data on QPS Production and Use

Comment: The comment cites inconsistent and missing QPS usage data reported to UNEP regarding methyl bromide usage.

Response: This is exactly the reason that APHIS does not depend upon their reporting as the primary basis for quantitation, but uses it mainly as a cross-check of the information collected through NPPOs.

This issue is partly covered in response to point 5 from the California Attorney General's Office and others. The breakdown by country is presented in appendix E by category. Use of method 1 applies to the usage of methyl bromide by those 65 countries lacking compliance data that are assumed to fumigate with methyl bromide. Method 2 strictly applies to China. Method 3 applies to Canada, Mexico, and the 22 countries providing some data about fumigating WPM with methyl bromide to comply with APHIS regulations. Method 4 strictly applies to Hong Kong. Method 5 applies only to Japan which indicated fumigation prior to assembly of WPM. For China, Hong Kong, and the 65 countries analyzed under method 1 where compliance data are lacking, the analysis applied half of their WPM to heat treatment and half to fumigation with methyl bromide. Method 4 applies to Hong Kong and involves "Treatment of Assembled WPM in Sealed Containers Before Loading of Cargo," not treatment before assembly (see page D–5 of the draft SEIS. The basis for this method is explained on page 21 of the draft SEIS and

related to representative treatment from the origin of many shipments there. These methods are designed to provide a conservatively high estimate for those countries where data are lacking. Where more information was available, more refined calculations were used in the SEIS' refinement of methyl bromide estimates.

4. Availability of Ozone-Safe Treatment Methods

APHIS does acknowledge that there are alternate options to methyl bromide; however, APHIS has limited regulatory authority independent of formal justification to the IPPC. Further, there are several issues to address prior to requiring alternative treatments to methyl bromide (e.g., cost comparisons, environmental impacts, durability, etc.). Any shipping requirements implemented in this regard would need to continue to facilitate trade and be equally feasible for both developed and developing countries.

Comment: Part of the comment suggests the use of recycle and recapture technologies by which methyl bromide emissions can be captured and removed prior to release following treatments.

Response: Recycle and recapture technologies may have the ability to reduce methyl bromide emissions; however, the cost of such systems must be assessed to determine the feasibility of such systems for all shipping countries. This was discussed briefly on page 62 in the FEIS. Also, the assessment of such systems would need to be initiated in a proposed rulemaking outside of this SEIS.

Comment: The comment also mentions Japan's proposal to use a mixture to treat wood packaging material which includes sulfuryl fluoride, methyl isothiocyanate, and methyl iodide.

Response: There are many potential alternatives to methyl bromide; however, they have not been adopted for use in place of methyl bromide for various reasons. Although sulfuryl fluoride may not pose the same harmful ozone depleting effects as methyl bromide, it may not provide the efficacy necessary to eliminate all life stages (including egg stage) for pest risks of concern. Similarly, methyl isothiocyanate and methyl iodide require further efficacy data to determine if they are sufficient candidates for the treatment of wood packaging material to prevent U.S. wood pests of concern (e.g., ALB). In addition, the environmental characteristics of these pesticides need further consideration. For example, sulfuryl fluoride is known to contribute to global warming on the order of 25,000 times the global warming potential of carbon dioxide (Dervos and Vassiliou, 2000 as cited in Knight, 2004). Contributing to another global problem (atmospheric warming) to reduce a different global impact (ozone depletion) is probably not an appropriate solution. Moreover, this SEIS is limited to the refinement of methyl bromide estimates and, thus, the

subject of methyl bromide alternatives presented in this comment are beyond that scope.

5. Failure to Confront Pest Survival After Proper Treatment and Prevalence of Fraud

Comment: Several references in this comment are cited in their relationship to this issue. One paper presented at a USDA-sponsored research forum indicating that the 3 to 5 percent negligible risk standard held by APHIS would translate to the probable arrival in the United States of many quarantine pests.

Response: The claim made in the paper expresses one opinion and has been reviewed by APHIS managers.

Comment: The comment also discusses treatment failure rates and technical justification for Australia's standard.

Response: The pests of quarantine significance to Australia differ from those of concern to the United States, so it is difficult to ascertain what actually applies to APHIS regulations.

Comment: In their comment citing a study by Burgess (2005) and Allen (2001b), question is raised over the limited acceptable confirmation for treatments. However, there are several requirements for ensuring that compliance with treatments are achieved (e.g., IPPC container markings).

Response: APHIS is concerned with compliance with our regulations and did consider this issue in early rulemaking. This was part of the reason for conducting the compliance study of China cited on page 16 of the FEIS. Further, ongoing monitoring of pest interceptions allows for continuing assessment of how effective and how well treatment requirements are being adhered to. APHIS, in early deliberations, recognized the potential for some fraud and continues to work with NPPOs of other countries to ensure that treatments of packing materials adhere to our regulatory requirements.

6. EPA Office of Federal Activities

The U.S. Environmental Protection Agency reviewed the draft SEIS and expressed their lack of objection to APHIS' adoption of the IPPC guidelines. Accordingly, they assigned a Lack of Objections (LO) rating to the document. APHIS appreciates their thorough review of our NEPA documents.

III. Comment Letters

All Comment Letters submitted to APHIS are reproduced on the subsequent pages.

NATIONAL WOODEN PALLET
AND CONTAINER ASSOCIATION

1421 PRINCE STREET, SUITE 340, ALEXANDRIA, VA 22314-2805
TEL: 703-519-6104 FAX: 703-519-4720 WWW.PALLETCENTRAL.COM

Comments on the Use of Methyl Bromide for the Elimination of Invasive Species In Solid Wood Packaging By the National Wooden Pallet and Container Association

INTRODUCTION

The National Wooden Pallet and Container Association (NWPCA) is the largest organization in the world representing wooden packaging companies. While our primary membership base is in the U.S., we have members in 29 other countries.

Wood pallets and containers are the most environmentally responsible shipping and storage platforms available. Wood packaging materials are reusable, repairable, recyclable and made from a renewable resource. Our members use a grade of lumber that is a byproduct of other primary wood products such as furniture and construction materials. Were it not for the shipping platforms and containers manufactured by our industry, this lumber would largely be discarded. Further, the material from pallets, no longer able to be repaired, can be turned into useful, marketable products such as playground mulch, animal bedding and wood stove briquettes rather than discarded into landfills.

Wooden pallets transport well over 85 percent of every manufactured product that is bagged, crated, boxed or otherwise packaged and shipped throughout the entire world. They are indispensable to global commerce.

Obviously our members have a major stake in ensuring the perpetuation of America's forests – and American shippers have a significant interest in assuring widespread continued access to wood pallets and containers.

ENVIRONMENTAL COMPATIBILITY FOR ALTERNATIVE MATERIALS – SHORTSIGHTED

The Draft Supplement to the Final Environmental Impact Statement continues to suggest that alternative materials to wood packaging would have fewer environmental consequences. These statements are made without any references to scientific evidence to support them. One such statement is as follows:

> "Substitute packaging materials only (prohibition of WPM), as suggested in the FEIS, would achieve the greatest reduction of pest risk with the least environmental impact from its component control methods, but would generate some impacts from the manufacturing process."

That concept ignores the fact that such packaging materials as plastic pallets are made from petrochemical feedstock, which unlike wood is a non-renewable resource. Of even more concern from an environmental standpoint is the fact that the "substitute packaging materials" are not biodegradable. Their impact at the life-end of the product has not been considered.

Perhaps the authors of this supplemental statement are under the impression that plastic pallets are able to be used indefinitely. They cannot. Plastic pallets under load begin to bend. When they bend to the point that a forklift can no longer easily be inserted, the plastic pallets are discarded. While some can be ground up, reformulated and extruded into other plastic products, the energy required is significant and most end up in landfill.

The impact statement also fails to consider the issue of the increased fire hazard posed by plastic pallets. The National Fire Protection Association has always required a one-class upgrade in fire protection from that defined for storage on wooden pallets. Under new regulations issued in 2002, a two-class upgrade is now mandatory for users of reinforced polypropylene and polyethylene plastic pallets. Un-reinforced plastic pallets remain a one-class upgrade over wooden counterparts.

The burning of fossil fuels produces air pollution and carbon dioxide (C02), which is a principal greenhouse gas. Trees, during their growth phase, draw carbon dioxide from the atmosphere, release oxygen back, and use the carbon to produce wood and leaves. Through this process, trees remove large quantities of carbon dioxide from the atmosphere and store it in their cells.

When a tree is cut down, the carbon it stored during its life cycle is retained within its cellular structure. The harvesting of trees and manufacturing of forest products transfers the carbon from the forests to wood products like pallets and containers. Those wood shipping platforms, store carbon for long periods of time. Alternative materials – especially petrochemical byproducts – cannot compete with wood in this environmental arena.

The wood pallet and container industry has successfully adopted and put into practice effective pest elimination standards. Through monitoring by a variety of PPOs around the world we know there have been few infestations since the international standard has been put in place and that the rate of interceptions at the ports and borders is less than one-tenth of one percent. There is no reason even to consider alternative materials, which have a strongly negative impact on the safety of warehouse facilities and on the environment that have yet to be considered.

WOOD PALLETS – THE MARKET CHOICE

The wood pallet and container industry retains the enormous market share it does because wood remains strong, durable and cost effective. Those who have made a commitment to alternative materials are finding skyrocketing costs a serious problem. One example of that is the United State Postal Service (USPS).

According to an article in the August 2006 Material Handling Management, USPS purchased 2,244,672 pallets in fiscal 2004 for $11.36 each for a total of $25,506,006. In 2005, USPS spent just under $10 million when it purchased pallets for $14.23 each. Just one year later, USPS paid $22.75 for each plastic pallet for a total of $6,818,175 pallets – and that was just its first quarter to replace its reserve pallets. With the price of these petroleum-based products doubling in three years, few private-sector shippers would choose these products over wood pallets, which are about one-fourth the cost.

AN INDUSTRY EMBRACING ENVIRONMENTAL INNOVATIONS

The NWPCA received a federal grant to develop a production system by which industry wood waste would be collected at a regional location, finger-jointed into lumber materials, and distributed to participating wood packaging companies for use repairing and remanufacturing wood pallets. If the project proves itself to be a practical, commercially viable enterprise, the association will establish regional facilities to maximize the use of this recycling technology program. This program is one example of the environmental innovations being pursued by the NWPCA.

The wood packaging industry has a deep commitment to the preservation of the world's forests through the application of effective methods for the elimination of invasive pests. As a trade organization, the National Wooden Pallet and Container Association (NWPCA) goes further in actively encouraging and supporting the development of practical new treatment methods that minimize the potential for negative environmental impacts.

From the earliest discussions of technical issues surrounding the creation of a workable global standard for the wood packaging industry, the NWPCA sustained the goals of the international community by educating the U.S. wood packaging industry about the emerging standard long before it took effect. This knowledge transfer spread beyond the industry to include wood pallet and container users and industry suppliers so the response to the new measure was quick, efficient and operational from the earliest days of the treatment programs.

The consensus of the international Plant Protection Organizations (PPO) was that there would be two allowable treatment methods that had been determined to be effective in the elimination of invasive species – heat treatment and fumigation with Methyl Bromide. At the request and urging of APHIS USDA, NWPCA was designated as the manager of the fumigation program with the American Lumber Standards Committee (ALSC) taking on the supervising role for heat treatment.

From the outset, NWPCA viewed the fumigation program as limited, and probably temporary, as far as United States wood packaging production is concerned. The use of Methyl Bromide is necessary at this time for many of the less developed participating countries in the International Plant Protection Convention (IPPC). It was also needed as a temporary measure for many smaller wood pallet and container companies when the ISPM-15 requirements first took effect.

The number of pallets being fumigated with Methyl Bromide in the U.S. is quite small – approximately 7 percent. Most are from small business owners who cannot make the enormous capital investment required for heat treatment. However, many of our members have said they are selling their heat-treatment services to competitors in their areas so the use of fumigation is diminishing further.

Another scenario for the use of fumigation is employed by shippers who have pallets under load that were expected to be distributed domestically that then become needed instead for export. Many of these can be treated under load with Methyl Bromide, whereas heat treatment is not viable for most products under load.

NWPCA has suggested to USDA the establishment of the international standard for domestic use – that is the treatment of all new or repaired wood packaging materials. This was in response to infestations in four states by the Emerald Ash Borer and in two others by the Sirex wood wasp. Such a standard would require all pallets to be treated and marked thereby eliminating much of the need for treatment under load since all pallets would be treated. Unfortunately, USDA has not as of yet adopted a domestic standard compatible with the international requirements.

NWPCA welcomes a replacement for Methyl Bromide. Currently, it is an accepted international treatment method and remains necessary for some industry members in the U.S. and a number of countries worldwide. We encourage and support the development of effective, efficient, workable treatment options that would be environmentally responsible alternatives to fumigation. When such an alternative becomes viable, NWPCA will educate our industry on its effective use. However, any suggestion or implication that the use of alternative materials is environmentally advantageous as a means of eradicating invasive species is totally unacceptable, impractical and contrary to a harmonized international rule.

EDMUND G. BROWN JR.
Attorney General

State of California
DEPARTMENT OF JUSTICE

1515 CLAY STREET, 20TH FLOOR
P.O. BOX 70550
OAKLAND, CA 94612-0550

Public: 510-622-2100
Telephone: 510-622-2137
Facsimile: 510-622-2270
E-Mail: ken.alex@doj.ca.gov

April 23, 2007

David A. Bergsten, Biological Scientist
Michael Simon, Senior Staff Officer
U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Policy and Program Development, Environmental Services
4700 River Road
Riverdale, MD 20737

Re: Draft Supplement to the Final Environmental Impact Statement -- February 2007, Importation of Solid Wood Packing Material

Dear Mr. Bergsten and Mr. Simon:

Following discovery that its estimates of methyl bromide fumigation usage upon which it based its proposed rule for importation of wood packaging material for reduction of pest risk had no factual basis, the Animal and Plant Health Inspection Service (APHIS) issued a 30 page document, which it entitles a "Draft Supplemental Environmental Impact Statement" (DSEIS). This document consists almost entirely of a new estimate of methyl bromide usage together with a rehash of the conclusions reached in its earlier final environmental impact statement (WPM FEIS) prepared in August 2003 in connection with the final rule for the importation of solid wood packaging material (WPM), 69 Fed. Reg. 5719 (Sept. 16, 2004). By this letter, the undersigned are submitting comments regarding the DSEIS. As described in greater detail below, the DSEIS is legally and factually deficient, fails to consider the impact of the new information on the proposed rule and its alternatives, fails to include or consider other new information such as the availability of non-wood pallets and the viability of a phase-in of the use of such pallets, and precludes any outcome other than that no change in the final WPM rule is appropriate.[1]

APHIS filed this supplement as a result of issues raised by the parties to this comment letter. After the parties filed a lawsuit challenging APHIS's final rule and its NEPA

[1] Further, given the short period in which to review the DSEIS, we request a 30-day extension of the comment period within which to submit supplemental comments. The reason for this request is that we have asked several independent experts to review portions of the DSEIS, and there has not been enough time for that work to be completed.

documentation, APHIS admitted that its estimate of methyl bromide usage was flawed because it relied on an unfounded assumption that methyl bromide fumigation would occur before, rather than after, cargo is loaded onto pallets and into shipping containers. Rather than withdrawing the proposed rule and re-evaluating the impacts and the alternatives, APHIS has chosen a short-cut, simply submitting the supplement without properly reconsidering the underlying conclusions, most or all of which were based on the faulty original usage estimate.

As we predicted in our court papers, APHIS's supplement "simply conclude[s] that the agency's decision to adopt the Rule was right all along."[2] By failing to withdraw the proposed rule and re-do the analysis, APHIS has abdicated its responsibility under NEPA. We have set forth the legal arguments reflecting this abdication in our brief submitted to the district court in our on-going legal challenge to the rule. We hereby incorporate those legal arguments, which we have attached, as part of our comments on this supplement.

More important than the failure to follow NEPA requirements with this supplement, or because of this failure, APHIS has missed a prime opportunity to increase the safety of our agriculture and environment. For instance, on March 27, 2007, *The New York Times* and *New York Daily News* reported that the Asian Longhorned Beetle was found on Staten Island for the first time. It has not been determined how the beetle arrived, but Staten Island is immediately adjacent to numerous port facilities. This new infestation indicates that a more effective alternative than treated WPM should be required.

For the reasons set forth in our legal brief, APHIS should withdraw the supplement, the FEIS, and the final rule and redo both the environmental review and rulemaking decision. In addition, the supplement itself is deficient for the reasons set forth below.

1. **APHIS improperly hides the environmental impacts of the increased methyl bromide use for fumigation by combining it with potential reduction of methyl bromide use for other purposes.**

APHIS argues several times in the DSEIS that although the use of methyl bromide for wood packing fumigation is increasing, the overall worldwide use of methyl bromide continues to decline as methyl bromide is phased out pursuant to the Montreal Protocol. APHIS contends that even as some countries, most notably China, have increased their overall usage of methyl bromide, this has not changed the general downward trend. DSEIS at 5. It also states that "[w]ith the ongoing phaseout of most usage of methyl bromide (that has contributed up to only a 1-percent effect on stratospheric ozone), the continuing usage from compliance with APHIS's

---

[2] We anticipated that APHIS would file an Environmental Assessment rather than a DSEIS, but the difference is one of nomenclature alone; the cursory DSEIS is simply an Environmental Assessment with a longer name

WPM rule (which is less than one-thirtieth of total methyl bromide usage) is more than compensated by the dramatic overall reductions that are continuing to occur." DSEIS at 25. APHIS later contends that the continuing usage from compliance with APHIS's WPM rule is "about one-tenth of total methyl bromide usage." DSEIS at 30. APHIS further states that "the potential amount of ozone depletion from the decreased anthropogenic usage of methyl bromide, at present, is considerably less and would not be the primary factor limiting the recovery of the ozone layer (unlike the chlorofluorocarbons)." DSEIS at 15.

The finding of 1-percent effect on stratospheric ozone from global methyl bromide usage was based on a 1998 report, NOAA , *et al.*, Scientific Assessment Of Ozone Depletion: 1998 Executive Summary, World Meteorological Organization Global Ozone Research and Monitoring Project Report No. 44. However, the WMO/UNEP "Scientific Assessment of Ozone Depletion: 2006" report states that "bromine is now estimated to be approximately 60 times as effective as chlorine in global ozone depletion on a per-atom basis." (WMO/UNEP 2006 at 21.) "This value is larger than the effectiveness of 45 used in the 2002 Assessment. This increase in the effectiveness of bromine increases the Ozone Depletion Potential of bromine-containing compounds, evaluated using the semi-empirical method that has been used in previous Assessment." (WMO/UNEP 2006 at 21) As a result, APHIS needs to recalculate the impact using these new findings given that the damage caused by bromine compounds is *25% greater* than that used in the 1998 study cited by APHIS. On this basis alone, the DSEIS in inadequate.

2. APHIS's compliance data is far from complete, and the omissions preclude a viable conclusion.

APHIS states that "[t]he specific information now available regarding how exporters in different countries actually comply with ISPM 15 is new information that is relevant to environmental concerns and bears upon the analysis of potential impacts of the actions associated with APHIS' wood packaging rule." DSEIS at iv. APHIS concedes that "some phytosanitary authorities were unable to provide the desired information for their respective country," but contends that "the responses were sufficient for a thorough refinement of the earlier methyl bromide estimates." DSEIS at 17. It turns out that APHIS has *no data* for the largest user of methyl bromide fumigation; APHIS "lacks data about overall compliance with ISPM 15" for China. DSEIS at 18. Without the China data, APHIS instead relied in part on a previous agency trip report from 1999 that included "visits to specific port and other treatment facilities of WPM in China." *Id.* APHIS provides no basis for concluding that the information is sufficient to make an accurate estimate of Chinese methyl bromide use, and at the very least is eight years out of date. Moreover, there is no basis for concluding that the data are representative because they derive from a period since which international trade has increased rapidly and compliance with ISPM 15 has scaled upward. China's usage is particularly important, since it is the largest aggregate annual user of methyl bromide by a substantial margin according to APHIS's estimates. DSEIS at 28. Furthermore, the comparison of the total methyl bromide capacity of China's three producers with the amount used for quarantine and preshipment (QPS), as

discussed in the DSEIS at 18, does not account for possible imports or the amount of stock remaining from previous years, indicating greater usage or fraudulent certifications resulting in less usage and inadequate treatment.

3. APHIS once again improperly precludes consideration of substitute packaging, this time by deciding that only alternative methods already in widespread use for trade may be considered.

APHIS states that it can make a change under WTO principles only if it is "no more restrictive of trade than necessary to achieve an appropriate level of phytosanitary protection." DSEIS at 5. APHIS erroneously interprets this to mean that the usage of an alternative method must be widespread for a switch to be permitted, and since "present trade depends heavily upon WPM, and fumigation with methyl bromide remains important enough for the shipping industry of some countries," there is not justification to change to a new method. DSEIS at 6. AHPHIS misunderstands the WTO provision.

Without question, APHIS could impose regulatory requirements beyond those established by market forces in order to protect against the importation of pests. For instance, Australia and New Zealand require all WPM to be debarked, which increases the effectiveness of methyl bromide and heat treatments in controlling pests, yet neither the IPPC nor APHIS has implemented this requirement. DSEIS at 23.[3]

Despite APHIS's claims regarding the lack of viable alternatives, an official of the European Commission's Ozone Layer Protection Team has explained that "as critical-use phase-out is quite advanced, we should and will put more focus on [the shipping and quarantining] area and evaluate more possibilities to phase out [methyl bromide's use.]" He added that he expects related rules to be promulgated in less than five years. (ES&T, *Technology News*, August 2, 2006.) The EPA concurs: as it stated in the preamble to 40 CFR Part 82, "In the years beyond the methyl bromide production and consumption phase-out, there will continue to be an exemption for quarantine and preshipment applications, but there may no longer be price pressures for moving away from these quarantine and preshipment applications of methyl bromide. Therefore, the Parties to the Protocol emphasize the importance of reviewing quarantine and preshipment applications and identifying when technically and economically feasible alternatives exist, and removing these applications from the exemption." (68 FR 248.)

Once again, APHIS ignores the possible use of a phase-out period for methyl bromide treated WPM, coupled with a phase-in period for alternative packing materials as part of a viable

---

[3] The European Union has delayed the implementation of debarking until January 1, 2009 primarily based on the United States' strong objection. This reflects APHIS's unwillingness to accept alternate approaches. *See* Pallet Enterprises, March 1, 2006.

alternative that must be assessed under NEPA. As we established in our legal papers in the court challenge, by establishing a defined phase-out/phase-in period, APHIS would promote the use of substitute packaging while allowing the market to adjust and thereby substantially reduce both the risks of pest importation and stratospheric ozone reduction. APHIS's recognition of the benefits of the phase-out approach with respect to other methyl bromide uses makes this failure to consider a phase-out of WPM even more puzzling. The DSEIS concedes that "[s]ubstitute packaging material that poses no potential risk of ozone depletion was considered in the FEIS as a possible alternative to WPM," and that "[t]he worldwide implementation of this alternative would lower the release of methyl bromide from packaging material use in international trade." DSEIS at 27. Not only would this alternative remove the risks to ozone depletion, it would also eliminate the risk of plant pests, yet this alternative was not re-evaluated using more recent data.[4]

APHIS contends that "the capability of industry to tool up to manufacture and switch to substitute packaging materials for such a shipping volume would limit the feasibility or implementation of a switch over. Further, the increased cost of substitute packaging materials relative to WPM and limited application of substitute packaging materials to niche markets does not provide the flexibility needed to fulfill the global trade needs at present." DSEIS at 7-8. However, nothing in the DSEIS shows that APHIS made a cost comparison between substitute packaging materials and WPM using today's market values. APHIS fails to note, for example, that the cost of methyl bromide has more than doubled since 1999 (Clarke, 2004), and it fails to include costs associated with certification and labeling, human health issues, and the cost of the pest infestations resulting from inadequate or fraudulent treatment of WPM. Furthermore, one entity at least, RPM Technologies, believes that plastic pallets are gaining market share at a rate of three to five percent per year and will make up 50 percent of the market within five years. (Business Wire, 2003). RPM also estimates that a completely recyclable plastic pallet that costs $11 will last at least 75 trips ($0.15/trip) compared to a Grade A wood pallet that costs $8 lasting about seven trips (1.14/trip.) Plastic pallets are up to 40% lighter than wood alternatives and their weight remains constant because they absorb no moisture, no treatment is required, and they are weather resistant. Plastic pallets have been used in Europe for 25 years and comprise 8% of the European pallet market. (Warehouse & Logistics News, 2006.) APHIS's failure to consider this information and to evaluate alternatives in a meaningful way makes the supplement virtually useless.

4. APHIS did not adequately identify and discuss the worldwide and collateral effects

---

[4] Indeed, the DSEIS notes that "[s]ubstitute packaging materials only (prohibition of WPM)...would achieve the greatest reduction of pest risk with the least environmental impacts from its component control method . . .." DSEIS at 7. We note that APHIS's discussion of substitute packaging materials in the FEIS is legally and factually deficient, for the reasons set forth in our legal papers. APHIS apparently cannot muster even that deficient level of consideration in the supplement.

of the WPM rule.

APHIS states: "The annual estimates in this SEIS assess only a given point in time. Trying to account for increases in world trade and other external factors would be speculative, and no attempt has been made to factor this into this analysis." DSEIS at 11. By not accounting for the increase in trade, APHIS's usage estimate will almost certainly be low, as it ignores the large growth that is currently occurring in trade, especially between the U.S. and China, the largest user of methyl bromide. A conservative estimate, as APHIS asserts that it provides in the DSEIS, would have incorporated trade growth into its model. An estimate of increased trade would have been less speculative than APHIS's guess about the type of fumigation techniques used by various countries. *See* DSEIS at 20-21.

Adoption of ISPM 15 results in fumigation of wood packaging shipped not only to the U.S., but to many other countries as well. Given the interconnection of global trade, the WPM rule has the potential to effect collateral impacts resulting in an increase of methyl bromide fumigation even in the trade between two foreign countries. But APHIS fails to make any prediction on the collateral effects this rule might have. APHIS notes, for example, that most exports from South Korea are currently heat treated, but that exports from South Korea to Norway and Russia are fumigated with methyl bromide. DSEIS at 17. Although APHIS agrees that all countries must comply with the ISPM regulations of other countries as well as APHIS's WPM rule, it concedes that the lack of reliable data about the amount of world trade makes any cumulative analysis unreliable and limits the DSEIS to relative effects of imports to and exports from the U.S. DSEIS at 29.

5. APHIS does not provide adequate information to make a fair assessment of the accuracy of its estimates.

APHIS provides very limited reference to the type of data it received in response to the questions it sent to foreign phytosanitary authorities. The report simply states that "[a]lthough some phytosanitary authorities were unable to provide the desired information for their respective country, the responses were sufficient for a thorough refinement of the earlier methyl bromide estimates." DSEIS at 17. The reader must take this statement on faith. The DSEIS does not state what information APHIS received and from which countries. It also does not discuss whether there was hard data to back up the information coming from the foreign phytosanitary authorities, or if they were merely estimates. This failure to disclose relevant information precludes meaningful evaluation.

Also, in its first table estimating the methyl bromide released by country and region from complying with the rule, APHIS includes the broad category of "Other Countries," but fails to list which countries are included in this category. DSEIS at 25. This is an oversight that makes it even more difficult to adequately assess the validity of the methyl bromide estimates.

Most calculations used to determine methyl bromide usage estimates as a result of

APHIS's WPM regulation in the DSEIS rely on U.S. Customs data related to import entries. The data for methyl bromide treatment of WPM for export from the U.S. is maintained by the National Wooden Pallet and Container Association (NWPACA). Comparable data were not available for import entries. Thus, estimates for all countries, other than the only country to provide its own data, Nicaragua, are calculated using U.S. Customs entry data. DSEIS at 18. The reliability and accuracy of these data are questionable given the reductions in Customs inspection activities and distribution of agricultural specialists reported in the GAO report, "Homeland Security: Management and Coordination Problems Increase the Vulnerability of U.S. Agriculture to Foreign Pests and Disease" (May 2006).

The data in the DSEIS are at variance with available data from the Montreal Protocol's Ozone Secretariat and its expert technical body, the Methyl Bromide Technical Options Committee (MBTOC). In 2002, MBTOC reported that based on data provided by countries to the Ozone Secretariat, "more than 11,410 tonnes methyl bromide was produced for QPS in 1999, and other estimates indicate that production for QPS may have been about 11,825 tonnes. Information available to date for 2000 indicates a range of 10,475 to 11,800 tonnes MB production for QPS purposes, accounting for about 19-21% of fumigant productions." UNEP further provides that on the basis of use data rather than production reports, the estimated range for QPS consumption is 10,600-12,300 tonnes, accounting for about 19-22% of global consumption in 2000. (UNEP, 2002.) While the MBTOC figures include all QPS uses, MBTOC identified wood packing fumigation as a large and growing fraction of the total. These figures are significantly higher than the 2,190-6,638 range provided by APHIS. DSEIS at 28.

APHIS further fails to account for potential increase in usage based on the limited efficacy of the current methyl bromide fumigation schedule. The DSEIS indicates that IPPC contracting parties have expressed concern that the methyl bromide treatment schedule did not achieve the desired reduction in pest risk. DSEIS at 6. APHIS suggests that any changes in application rate would require supplemental environmental documentation. DSEIS at 6. Again, APHIS's estimates – and its actions – fail to provide a conservative approach, placing U.S. agriculture at increased risk.

In a study from an APHIS contractor assessing risk reduction by treating SWPM, the data indicated that at the rate of entry of Asian Longhorned Beetles in packing material treated by fumigation with methyl bromide, *7,140 adult beetles per month* are expected to enter the Eastern Deciduous region. (Bartell, S.M, Nair, S.K., Divan, C.L., undated (Contract Number 53-6359-0-C-059).) Seven prominent United States Senators also expressed doubt about the effectiveness of methyl bromide and the potential environmental and public health impacts as well as complying with the commitment to phase out methyl bromide under the Montreal Protocol. (U.S. Senate, Letter to U.S.D.A, dated December 23, 2002.)

These findings underline the importance of properly evaluating alternatives to methyl bromide fumigation. This is a situation in which APHIS has selected an alternative that is both more environmentally damaging and less effective than other alternatives at APHIS's disposal.

APHIS has failed again to consider environmentally beneficial and more effective alternatives, and has distorted and ignored data in order to stick with its prior decision. As such, the DSEIS violates NEPA and common sense. APHIS must scrap this attempt along with the proposed rule and redo the process in compliance with the law.

6. APHIS makes no attempt to account for or estimate possible fraud in reporting, especially from China.

For APHIS to successfully claim that methyl bromide fumigation is more successful than other alternatives, it must consider the rate of treatment failure. One of the key sources of treatment failure identified in prior comments and the litigation is the incidence of fraudulent certification that packing material has been treated when, in fact, it has not. In its DSEIS, APHIS does not attempt to estimate the possible fraud in the reporting of methyl bromide fumigations, which would significantly undermine the pest prevention of the new rule. For example, in the discussion regarding China's methyl bromide estimates, APHIS states that based on the 1999 trip report and more recent contacts (when APHIS said it lacked any recent data), the DSEIS conservatively refines the methyl bromide estimates based upon treatment directly into already loaded containers resulting in 2,027 to 6,188 MT per year. DSEIS at 19. It then compares this amount to the 3,175 MT of methyl bromide produced by all of China for 2002 for all uses, and say that the projected range for the methyl bromide estimate is clearly elevated. *Id.* But if this analysis is correct it raises the alarming possibility that many of the shipments labeled as treated were not in fact treated with methyl bromide, given the gap between the projected high end of the tail and the actual amount produced. APHIS makes no attempt to account for this possible discrepancy or to estimate what effect such fraud might have on the overall effectiveness of reliance on methyl bromide treatment.

There is also the possibility that SWPM is being recycled and repaired and is not being fumigated or heat treated again. APHIS requires complete retreatment even if only one board is replaced, and the old mark is required to be obscured with a new mark applied by one of the inspection agencies. (APHIS, 2006.)

The issue of fraud was also addressed in the working papers of the Finnish Forest Research Institute. According to records from Australia, 82% of the quarantine breeches were cleared based on certification with respect to fumigations from overseas. (Clarke, 2004.) AQIS identified untrained staff, inadequate equipment, fraudulent activities, time delays between treatment and export and commercial pressures as responsible for the breeches. The U.S. capability to detect breaches is limited due to the numbers of SWPM entering the ports as well as staffing and training issues. This gives fumigators incentive to cheat given the low probability of being detected. (Clarke, 2004.)

CONCLUSION

In sum, APHIS has erred in developing the DSEIS by failing to properly reconsider all

aspects of the previous FEIS that are affected by the new information. Had it done so, we believe that the conclusions reached would likely have been considerably different.

Yours truly,

KEN ALEX
Supervising Deputy Attorney General
California Attorney General's Office

ANN ALEXANDER
Environmental Counsel and Assistant Attorney General
Illinois Attorney General's Office

MATT LEVINE
Assistant Attorney General
Connecticut Attorney General's Office

DAVID D. DONIGER
Policy Director, Climate Center
Natural Resources Defense Council

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

NATURAL RESOURCES DEFENSE COUNCIL, INC., Plaintiff, v. UNITED STATES DEPARTMENT OF AGRICULTURE; MIKE JOHANNS, Secretary of Agriculture; and W. RON DEHAVEN, Administrator of the Animal and Plant Health Inspection Service of the United States Department of Agriculture, Defendants.	)	05-CV-8005 (LMM)
STATE OF NEW YORK, PEOPLE OF THE STATE OF CALIFORNIA, EX REL. BILL LOCKYER, ATTORNEY GENERAL, STATE OF CONNECTICUT, and STATE OF ILLINOIS, Plaintiffs, v. UNITED STATES DEPARTMENT OF AGRICULTURE; MIKE JOHANNS, Secretary of Agriculture; and W. RON DEHAVEN, Administrator of the Animal and Plant Health Inspection Service of the United States Department of Agriculture, Defendants.	)	05-CV-8008 (LMM) CONSOLIDATED ECF CASES

PLAINTIFFS' JOINT SUPPLEMENTAL SUMMARY JUDGMENT MEMORANDUM OF LAW

INTRODUCTION

The National Environmental Policy Act (NEPA) is a procedural statute that requires an agency, before committing to a major federal action, to carefully and objectively analyze the environmental consequences of the action and all reasonable alternatives to it. APHIS concedes that it failed to take this required "hard look" when it based its estimate of global methyl bromide usage that will result from the challenged Rule on an assumption that was not only unfounded, but flatly contradicted by a key document that the agency possessed at the time of its rulemaking, yet failed to review.

To cure this material NEPA violation, APHIS proposes to revise its methyl bromide estimate and, depending on the outcome, prepare either an "environmental assessment" or a "supplemental" environmental impact statement (EIS) based on the revised estimate. *See* Ltr. from Michael J. Garcia to U.S. District Judge Lawrence M. McKenna (June 21, 2006).[1] APHIS thus purports to "remedy" its baseless methyl bromide estimate by performing a new analysis *now* – and if the numbers work out the same, no harm, no foul. APHIS will simply note its findings in an environmental assessment, which involves a more cursory analysis and less opportunity for public comment than a full EIS, and conclude that the agency's decision to adopt the Rule was right all along.

This is not the process that NEPA prescribes. First, correction of APHIS's failure to properly evaluate the environmental consequences of an action in an EIS warrants the re-evaluation of those environmental consequences in nothing short of a new EIS.[2] Second, the

[1] APHIS also seeks an order declaring plaintiffs' claims with regard to the methyl bromide issue mooted based on its concession and voluntary remand. A claim is moot only when no effective relief for the alleged violation can be given. *See Fund for Animals v. Babbit*, 89 F.3d 128, 133 (2d Cir. 1996); *see also Neighbors of Cuddy Mountain v. Alexander*, 303 F.3d 1059, 1065 (9th Cir. 2002). Because plaintiffs challenge APHIS's proposed remedy, the methyl bromide claim is not moot.

[2] A supplemental EIS (SEIS) is actually the same as a new EIS. Whether an environmental impact statement is deemed "supplemental" or "new" is inconsequential; both require a reconsideration of the decision to adopt the Rule

effort to segment this issue from the other faults in the EIS is improper. Precedent dictates that the Court review the current EIS as a whole, rather than address its defects on a piecemeal basis. This ensures that on remand APHIS will address the full scope of the current EIS's deficiencies, thereby promoting judicial and administrative efficiency, as well as minimizing the ability of the agency to paper over individual defects so as to adhere to its original decision. Consequently, before imposing any remedy, the Court should examine the entire EIS and decide plaintiffs' summary judgment motion, which has been fully briefed.

APHIS's concession also casts doubt on APHIS's analysis of other issues in the EIS, and underscores plaintiffs' concern that the EIS is merely a post-hoc rationalization of a regulation that APHIS had firmly committed to before conducting the required NEPA review. The Court is thus justified in taking a more critical view of the remaining issues: APHIS's failure (a) to evaluate the reasonable alternative of a multi-year phase-out of raw wood packaging and (b) to address how counterfeiting of treatment undermines the effectiveness of the current Rule, a problem that the phase-out alternative would obviously eliminate.

All of the analytical failures in the current EIS interact with one another. A different methyl bromide usage estimate, for instance, might have given APHIS greater pause before discarding the option of phasing-in substitute packaging. Likewise, a reasonable assessment of a phase-in of substitutes might have lowered APHIS's resistance to adopting practicable requirements that are both more effective against invasive pests and less damaging to the ozone layer. In short, if APHIS had rationally conducted the "hard look" required by NEPA, the agency might have adopted a different rule under the Plant Protection Act.

Once the Court determines the full scope of APHIS's NEPA liability, plaintiffs

---

based on the new or revised information. The terms "SEIS" and "EIS" have been used interchangeably by the courts. *See Sierra Club v. U.S. Army Corps of Engineers*, 701 F.2d 1011, 1035 (2d Cir. 1983).

respectfully request that the Court order APHIS to prepare a new EIS that (a) estimates the likely increase in methyl bromide use to be expected under the Rule based on realistic assumptions, (b) evaluates the environmental impact of counterfeit marking, and (c) takes an objective look at a phase-out of raw wood packaging implemented over a reasonable range of time periods. In addition, plaintiffs request that the Court order APHIS to re-evaluate, based on this new EIS, whether its current Rule, which tolerates both continued pest risk and depletion of the ozone layer indefinitely, is the best choice given the alternative of a phased transition to substitute packaging that eliminates both hazards.[3]

ARGUMENT

I. APHIS's Conceded Error in Estimating Methyl Bromide Usage Constitutes a NEPA Violation Requiring Preparation of a New EIS.

There is now no longer any question that APHIS violated NEPA with regard to the methyl bromide estimate. APHIS admits that its estimate was flawed because the agency relied on an unfounded assumption that methyl bromide fumigation would occur before, rather than after, cargo is loaded onto pallets and into shipping containers. This assumption was also contradicted by a previously undisclosed 80-page report, the result of an APHIS inspection of methyl bromide fumigation operations in China in 1999. *See* Ltr from Michael J. Garcia to U.S. District Judge Lawrence M. McKenna (June 21, 2006).

APHIS's failure to evaluate relevant data has serious consequences. First, it completely undercuts NEPA's "hard look" requirement. NEPA "does not allow an agency to rely upon the conclusions and opinions of its staff … without providing both supporting analysis and data."

[3] Plaintiffs do not intend to impede APHIS's development of a revised methyl bromide estimate, which it says it has already begun. Plaintiffs insist only that APHIS be barred from attempting to close out the issue of the adequacy of its methyl bromide estimate with a cursory environmental assessment conducted without the discipline required in a full EIS, specifically without soliciting and having to respond to public comments, without addressing in an integrated fashion all of the related defects in the current EIS, and without a meaningful opportunity for this Court's review of the resultant product.

Sierra Club v. Eubanks, 335 F. Supp. 2d 1070, 1076 (E.D. Cal. 2004) (citing *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150 (9th Cir. 1998)). "Credible scientific evidence that contraindicates a proposed action must also be evaluated and disclosed." *Id.* (citing 40 C.F.R. § 1502.9(b)). "An agency's hard look should include neither researching in a cursory manner nor sweeping negative evidence under the rug." *Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 194 (4th Cir. 2005).

Second, APHIS's error has significant implications for human health and the environment. APHIS likely dramatically underestimated global methyl bromide usage under the Rule because post-loading fumigation uses a far greater amount of methyl bromide than pre-loading fumigation. If APHIS's first global estimate (done in conjunction with a rule regarding wood products from Mexico) is correct, *see* Pls.' Opening Br. at 18, then the current Rule has resulted in the global release of 400 times as much methyl bromide annually for quarantine uses as before the Rule. *Id.* at 39.

In light of these legal and environmental consequences, APHIS's faulty methyl bromide analysis alone suffices to require a new EIS. APHIS proposes an environmental assessment, and not an EIS, as a remedy if the agency deems the new estimate to be similar to the original one. This type of cursory documentation is insufficient to remedy APHIS's fundamental – and likely pervasive – procedural error, especially after the agency has already committed to a rule and the danger of post-hoc rationalization exists. An environmental assessment is a short analysis conducted at the beginning of the rulemaking process to determine whether the agency's proposal will significantly affect the environment and thus require a full analysis of impacts and alternatives in an EIS. *See, e.g.*, *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 546 (11th Cir. 1996). APHIS long ago determined that the Rule does significantly affect the environment,

largely because of the danger to the ozone layer posed by methyl bromide, and thus that it was obligated to undertake an EIS. Having conceded its failure to produce an accurate methyl bromide estimate, the required remedy is for APHIS to redo the EIS: to take the required "hard look" at the methyl bromide issue (and other faults in the current EIS), provide a detailed analysis of its findings, solicit public comments, and reconsider the underlying decision.

II. The Court Should Evaluate the EIS as a Whole to Determine the Full Extent of the NEPA Violation Before Remanding the Rule for Reconsideration in a New EIS.

Even if APHIS were to agree to conduct an EIS, not merely an environmental assessment, regarding the revised methyl bromide estimate, a partial remand on this one issue without consideration of other defects in the current EIS (the failures to consider counterfeit marks and a transition to substitute packaging) is contrary to NEPA principles. By requiring a "hard look" at all reasonable alternatives and their environmental impacts, NEPA requires that alternatives and impacts be analyzed in *relation* to each other, not in isolation.[4] A court should thus review the EIS as a whole, taking a "totality of the circumstances" approach. *See Nat'l Audobon Soc'y v. Dep't of Navy*, 422 F.3d 174, 186 (4th Cir. 2005) ("[A] court must view deficiencies in one portion of an EIS in light of how they affect the entire analysis.…[and] examine all of the various components of an agency's environmental analysis in order to determine, on the whole, whether the agency has conducted the required 'hard look.'").

In conducting this review, a court is entitled to examine the EIS at issue with an especially critical eye. The failure to analyze information critical to the methyl bromide estimate undermines APHIS's analytical credibility with regard to the other two NEPA issues. It also

[4] *Monroe County Conservation Soc'y, Inc. v. Volpe*, 472 F.2d 693, 697-98 (2d Cir. 1971) (A "detailed and careful analysis of the relative environmental merits and demerits of the proposed action and possible alternatives" is the "linchpin" of the EIS.); *Natural Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 834 (D.C. Cir. 1972) (It is the "essence and thrust of NEPA that the pertinent [s]tatement serve[s] to gather in one place a discussion of the relative environmental impact of alternatives.").

suggests that the current EIS was a post-hoc rationalization. APHIS published the draft EIS in October 2002, six months after agreeing to the International Plant Protection Convention's methyl bromide treatment guidelines. APHIS itself described the EIS as "unusually concise and subjective." Draft EIS at 4. These factors call into question APHIS's compliance with NEPA.

A. APHIS's Failure to Consider the Phase-Out Alternative Violates NEPA.

Although APHIS concedes the need for a new methyl bromide analysis, it adamantly refuses to do an analysis of the alternative that APHIS itself identified – a phase-out of raw wood in favor of substitute packaging over a reasonable transition period – that would both reduce the need for methyl bromide and increase the effectiveness of the regulation. Both APHIS's EIS and the Rule clearly show that the agency did not examine this option, in violation of NEPA's requirement to examine all reasonable alternatives.

As detailed in plaintiffs' briefs, APHIS first identified the option of moving from raw wood packaging to substitutes over a reasonable transition period in a 1999 Advance Notice of Proposed Rulemaking. *See* 64 Fed. Reg. 3049, 3051 (Jan. 20, 1999). Although the agency promised to seek public comment on that option and analyze the environmental effects of any alternatives in full compliance with NEPA, *see id.*, it did not do so.

This is apparent from comparing the Notice with the Rule. The Rule's preamble does have a section *entitled* "Phasing Out WPM in Favor of Manufactured Materials," 69 Fed. Reg. 55,719, 55721-23 (Sept. 16, 2004), but the *contents* of this section demonstrate that APHIS actually ignored the phase-out option and considered only an immediate ban. The agency repeated its conclusions that substitute packaging "would achieve *the greatest possible reduction in risk* from the introduction of pests and pathogens associated with WPM," and that compared to the prescribed treatment methods, "*use of alternative packing materials reduces risk even*

more." 69 Fed. Reg. at 55721 (emphasis added).[5] But rather than address the phase-out option, the remaining discussion is entirely limited to the asserted economic problems of banning wood packaging immediately.

Even the very pages of the final EIS to which APHIS cites in its reply brief show precisely the opposite of APHIS's contention that it actually evaluated the phase-out option. Some statements merely reiterated the problem with an immediate ban. *See* Final EIS at 78 (referencing industry's inability to "*quickly* tool up" to switch to substitute packaging) (emphasis added). Other statements identified the *need* to evaluate a transitional period. *See id.* (Substitute packaging "would require a phase-in period"). APHIS cannot bootstrap the mere *identification* of needed analysis into an excuse for failing to undertake that analysis.[6] Nor can APHIS excuse the failure to attempt *any* analysis of possible phase-out schedules merely by asserting that the analysis might be "difficult." *Id.* at A-5.[7] And finally, APHIS cannot shift the responsibility for analyzing the phase-out option – an option that the agency itself identified and promised to assess in 1999 – onto the public commenters.[8]

---

[5] *See also*, Draft EIS at 37, 38 (substitute packaging would provide "substantially decreased risk from the introduction of pest organisms," and "would considerably reduce inspection efforts and would largely eliminate pest risks from wood-feeding insects and diseases"). The draft EIS also stated: "None of the treatment methods have been shown to effectively eliminate all pests. " *Id.* at 83.

[6] APHIS also observed that under present conditions substitute packaging was "unlikely to be the predominant packing material for the foreseeable future." *Id.* This states no more than the obvious: that absent restrictions on raw wood packaging, substitutes will gain market share slowly. It certainly does not constitute an analysis of what could be accomplished with a restriction on raw wood phased in over a reasonable transitional period. That analysis is found nowhere in the remainder of the final EIS. In the final EIS Appendix (A-5), APHIS refers back to the draft EIS. But aside from identifying the need for a phase-in period, the draft EIS contained no analysis of how the option might be implemented or how long would be required. Draft EIS at 38. It simply dropped the matter there.

[7] The appendix to the final EIS said only this: "It is *difficult* for APHIS to specify a time period when the present ability of substitute packing manufacturers to supply the market indicates a need for extended growth of the industry. The compliance time is particularly *difficult* to project when the new regulations are specifically directed to address packing materials from foreign countries whose industries may be less able to adjust readily to proposed changes." Final EIS at A-5 (emphasis added). But APHIS made no effort at all.

[8] APHIS acknowledged that "some comments were received in response to the Advanced Notice of Proposed Rulemaking…supporting the phasing out of SWPM." But APHIS then sought to blame the commenters for not providing "substantive information that could contribute to establishing a specific time period for compliance changes." It is the agency's duty to rigorously explore and objectively analyze all reasonable alternatives, and in this case, an alternative identified by the agency itself. *See* 42 U.S.C. § 4332(2)(C)(iii); 40 C.F.R. § 1502.14(a).

APHIS's reply brief attempts a two-part excuse for the failure to evaluate the phase-out alternative. First, APHIS asserts that the Rule provides an "appropriate" level of protection. Defs.' Reply Br. at 4.[9] Second, APHIS asserts a transition to substitutes is barred by the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures because it is not the least trade restrictive means of providing the "appropriate" level of protection. *Id.* Neither part of APHIS's argument withstands inspection.

First, the treaty (and the related International Plant Protection Convention) expressly preserve each nation's right to adopt domestic measures stricter than an international guideline if they are justified by sound science. *See* Pls.' Reply Br. at 18. APHIS concedes that it "can always choose to revise its own measures unilaterally," even if the international community does not agree. *See* Defs.' Reply Br. at 16. Thus, APHIS errs in suggesting that a transition to substitutes is barred *per se* as trade restrictive.

Second, APHIS's assertion that the current level of protection is "appropriate" is groundless given the fact that the agency does not actually know how much protection the Rule provides. Rather, since APHIS has repeatedly admitted that substitutes would provide "substantially decreased risk" and "the greatest possible reduction in risk," s*ee* page 7, *supra,* the agency should have shown some interest in whether it could do better.

In short, to meet its "hard look" responsibilities under NEPA, APHIS should have assessed how phasing in substitutes over a period of time would mitigate the asserted costs of an immediate ban, how much more pest protection would be achieved, and how much less damage would be inflicted on the ozone layer. Only after analyzing these three factors would APHIS be in a position to determine what level of pest risk is "appropriate" and what pest protections are

[9] APHIS keeps changing its terms. Previously, it described its treatment requirements as providing an "acceptable" or "necessary" level of protection. *See* 69 Fed. Reg. at 55,721, 55,724.

"practicable" under the Plant Protection Act.[10]

B. APHIS's Failure to Address the Consequences of Counterfeit Treatment of Raw Wood Packaging Under the Rule Also Violates NEPA.

APHIS overestimated the effectiveness of the Rule by failing to consider the problem of fraudulent certification – where raw wood packaging is marked as treated without actually having been treated. S*ee* Compl. ¶¶ 7, 12, 68-70; Pls.' Opening Br. at 2, 3, 19; Pls.' Reply Br. at 10. APHIS assumed throughout its rulemaking that foreign shippers will properly implement the agency's treatment methods, despite evidence that some fraudulently certify untreated raw wood packaging as having been treated, and that fraudulent certifications cannot be detected at U.S. ports. *See* Pls.' Reply Br. at 13. The problem of fraudulent markings was identified in comments to the Rule, *see* AR-V.6, and has since been publicly acknowledged by agency personnel, *see* Compl. ¶¶ 68-70. APHIS states only that it will target inspections on fraudulent certifiers, *see* Defs.' Reply Br. at 11, but this presumes that the fraud is *detectable*. Unfortunately, when pest outbreaks are found in our cities and forests, it will be far too late to connect the dots back to the guilty shippers.

III. The Court Should Set a Schedule for Simultaneous Reconsideration on All Three NEPA Deficiencies.

Preparation of a new EIS is the proper remedy even when there is one defect in the EIS, *see Natural Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 810 n.26 (9th Cir. 2005) – here there are three. Rather than ruling and remanding on each deficiency, however, the most efficient path for the Court is to rule and remand on all simultaneously. Avoiding piecemeal adjudication also saves the agency the time and expense of preparing multiple revisions of the EIS and the Rule. More importantly, it promotes the "hard look" and reasoned decisionmaking

[10] As plaintiffs have shown, the Plant Protection Act does not give APHIS carte blanche to deem pest risks "appropriate" or "acceptable" when there are more effective "practicable" measures available. *See* Pls.' Reply Br. at 16-18.

that NEPA requires by reducing the agency's ability to paper over individual defects and to use the new EIS as another post-hoc justification of its original decision.[11]

CONCLUSION

For the foregoing reasons, defendants' proposed order to dismiss part of plaintiffs' complaint as moot should be denied. Plaintiffs respectfully request that the Court rule on their summary judgment motion, require preparation of a new EIS to address all of the issues raised herein, and remand the Rule for reconsideration in light of that EIS. Plaintiffs also request that the Court establish a timeline for review of the new EIS, suggesting that APHIS have no more than nine months to publish a draft EIS and proposed new rule for public comment and no more than 18 months to issue a final EIS and a new Rule. Plaintiffs also request that the Court retain jurisdiction to satisfy itself that APHIS has properly remedied the defects in the existing EIS.

Dated: July 28, 2006
Armonk, New York

BOIES, SCHILLER & FLEXNER LLP

By: /s/ Melissa Kho

George T. Frampton, Jr.
Edward Grauman (EG-9825)
Benjamin Metz (BM-2011)
570 Lexington Avenue, 16th Floor
New York, NY 10022
(212) 446-2300

Melissa S. Kho (MK-3145)
333 Main Street
Armonk, NY 10504
(914) 749-8200

[11] Courts recognize that there is a substantial risk of post-hoc rationalization when an analysis is prepared after the agency has already made a decision on an action, and subsequently take a more critical view of the agency's explanations. *See Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 420 (1971); *Natural Res. Def. Council v. U.S. Army Corps of Engineers*, 2006 U.S. Dist. LEXIS 9140, at *64, *78 (S.D.N.Y. Mar. 8, 2006); *Metcalf v. Daley*, 214 F.3d 1135, 1142, 1146 (9th Cir. 2000) (Defendants must demonstrate that new analysis was objective and "free of the previous taint".).

David D. Doniger
NATURAL RESOURCES DEFENSE COUNCIL, INC.
1200 New York Ave., NW, Ste. 400
Washington, DC 20005
(202) 289-6868

Counsel for Plaintiff NRDC

FOR THE STATE OF NEW YORK
ELIOT SPITZER,
Attorney General

Peter Lehner (PL-2290)
Bureau Chief

William E. Dornbos
Assistant Attorney General
Environmental Protection Bureau
New York State Department of Law
120 Broadway
New York, NY 10271
(212) 416-8450

FOR THE STATE OF CALIFORNIA
BILL LOCKYER,
Attorney General

Ken Alex
Supervising Deputy Attorney General
Janill Richards
Deputy Attorney General
1515 Clay Street, P.O. Box 70550
Oakland, CA 94612-0550
(510) 622-2137

FOR THE STATE OF CONNECTICUT
RICHARD BLUMENTHAL,
Attorney General

Kimberly Massicotte (KM-7666)
Matthew Levine (ML-2346)
Assistant Attorneys General
P.O. Box 120, 55 Elm Street
Hartford, CT 06141-0120
(860) 808-5250

FOR THE STATE OF ILLINOIS
LISA MADIGAN,
Attorney General

Matthew Dunn
Chief, Environmental Enforcement/
Asbestos Litigation Division
Ann Alexander
Assistant Attorney General and
Environmental Counsel
188 West Randolph Street, Suite 2001
Chicago, IL 60601
(312) 814-3772

NRDC
THE EARTH'S BEST DEFENSE

NATURAL RESOURCES DEFENSE COUNCIL

Mr. David A. Bergsten
APHIS Interagency NEPA Contact
Environmental Services, PPD
Animal Plant Health Inspection Service
4700 River Road, Unit 149,
Riverdale, MD 20737-1238

Re: Draft Supplement to the Final Environmental Impact Statement – February 2007, Importation of Solid Wood Packing Material
Docket No. APHIS-2006-0152

Dear Mr. Bergsten:

Thank you for extending the comment period on the draft supplement to the FEIS. Since the original comment deadline, there has been a significant court decision and important new information has become available. We submit these comments to supplement those filed April 23, 2007.

A. *Natural Resources Defense Council v. USDA* Requires Reconsideration of the Wood Packing Rule

On June 4, 2007, in *Natural Resources Defense Council v. USDA*, 05 Civ. 8005 (LMM), the District Court for the Southern District of New York ruled on behalf of NRDC and the four State plaintiffs that APHIS violated the National Environmental Policy Act (NEPA) "in the matter of its estimate of the amount of methyl bromide that will be released into the atmosphere by reason of the rule at issue." Slip op. at 20. The Court stated that APHIS:

> has not complied with NEPA but rather acted arbitrarily and capriciously in that (i) its assumption that pre-loading fumigation will substantially replace post-loading fumigation is flawed, (ii) that flaw affects the methyl bromide release findings of the FEIS in a significant way, and (iii) the relation of its much higher estimates in connection with the China Interim Rule and the Mexico Rule to the present situation have not been considered adequately, or, if they have been, have not been adequately explained in the FEIS.

Id. at 20-21. The Court continued: "APHIS is to prepare and circulate a supplemental Environmental Impact Statement including a corrected estimate of the amount of methyl bromide that will be released annually, taking into consideration the higher estimates reached in connection with the China Interim Rule and the Mexico Rule, and explaining its views on the environmental impact of such new information and how that affects its decision to proceed or not with the rule at issue now in effect." *Id.* at 21. The Court instructed that:

> APHIS *must*, after considering its new methyl bromide release estimate, *evaluate its rulemaking decision anew*. "Although an [Environmental Impact Statement] may be supplemented, the critical agency decision must, of course, be made after the supplement has been circulated, considered and discussed in the light of the alternatives, not before. Otherwise the process becomes a useless ritual, defeating the purpose of NEPA, and rather making a mockery of it." Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 92 (2d Cir. 1975). *The amount of methyl bromide that will be released is too significant a question to treat as a mere correctible inaccuracy to be made without considering the impact of new information*. A corrected methyl bromide estimate in a supplemental Environmental Impact Statement cannot be regarded as a matter wholly unrelated to APHIS' rulemaking, as defendants may be suggesting.

Id. at 21-22 (emphasis added, some citations omitted).

We believe fulfilling the Court's remand requires a complete and adequate reassessment of the methyl bromide estimate, and then a complete re-evaluation of the underlying wood packing rule – in the Court's words, APHIS "must . . . evaluate its rulemaking decision anew." In our judgment, this new evaluation must include a fresh determination whether to change the treatment requirements of the rule in view of –

- the magnitude of this unnecessary risk to the ozone layer,
- the availability of ozone-safe treatment methods (heat treatment and alternative pesticides),
- the demonstrated problems that compromise the effectiveness of the rule (pest survival after proper treatment, and the prevalence of fraudulent certification of treatment), and
- the availability over a reasonable phase-in period of alternative packing materials that do not harbor invasive insect pests.

Natural Resources Defense Council intends to appeal the District Court's ruling regarding the adequacy of APHIS's consideration of the option of phasing in a requirement for the use of alternative packing materials. We believe the Court erred in concluding that APHIS actually considered this option, *id.* at 15-16. Further, the Court did not address at all our contention that APHIS overestimated the effectiveness of the chosen treatment method by, among other things, failing to address the impact of fraudulent treatment certification on the failure rate – the rate at which wood packing material will actually contain invasive pests.

We believe the chances of reversing the District Court's ruling on these points are high. Therefore we appeal to APHIS again to broaden the scope of its supplemental EIS and its reconsideration of the rule to address these issues – the treatment failure rate and the alternative of a transition to alternative packing material – properly now, without further delay. It makes little sense to complete the preparation of a narrow supplemental EIS and reconsideration of the underlying rule addressing only the impact of a revised methyl bromide estimate, only to be required to undertake a broader EIS and a broader reconsideration of the rule a short time later.

B. Risk to the Ozone Layer

The draft supplemental EIS does not reflect current scientific information on methyl bromide's risk to the ozone layer. First, we noted in our April 23rd comments that the draft does not take into account the most up-to-date international scientific assessment, the World Meteorological Association and United Nations Environment Program's "Scientific Assessment Of Ozone Depletion: 2006," available at http://ozone.unep.org/Assessment_Panels/SAP/Scientific_Assessment_2006/index.shtml.

The Scientific Assessment report concludes that the phase-out of ozone-depleting chemicals under the Montreal Protocol is beginning to work. Atmospheric concentrations of anthropogenic ozone-destroying compounds are coming down. However, the report states that the recovery of the ozone layer will take significantly longer than previously expected. For instance, the Antarctic ozone hole – the most visible symbol of human-caused global environmental damage – will not disappear until 2065. *Id.* at 21.

Recovery even by this date, however, depends on rigorous enforcement of the Montreal Protocol, and that extended and expanded QPS uses of methyl bromide could delay or even prevent recovery of the ozone layer:

> **Failure to comply with the Montreal Protocol would delay, or could even prevent, recovery of the ozone layer.** Emissions associated with continued or expanded exemptions, QPS, process agents, and feedstocks may also delay recovery.

Id. at 23 (emphasis in original). APHIS has not considered the Scientific Assessment's conclusion that "[e]missions associated with continued or expanded . . . QPS . . . may also delay recovery" of the ozone layer.

APHIS's key assertion – that methyl bromide usage in toto has contributed only a "a 1-percent effect on stratospheric ozone," and that methyl bromide use related to APHIS's wood packing rule is only one tenth of that – is both incoherent and out-of-date.

As we noted in the April 23rd comments, the Scientific Assessment reports that new research has shown bromine to be a significantly stronger ozone-depleter than previously thought:

> **Bromine is now estimated to be approximately 60 times as effective as chlorine in global ozone depletion, on a per-atom basis.** This value is larger than the effectiveness of 45 used in the 2002 Assessment. This increase in the effectiveness of bromine increases the Ozone Depletion Potential of bromine-containing compounds, evaluated using the semi-empirical method that has been used in previous Assessments.

Id. at 21 (emphasis in original). The draft supplemental EIS reflects no consideration of the increase in the scientific assessment of the ozone-destroying potency of methyl bromide.

APHIS's "1-percent effect" assertion is based (inaccurately, we believe) to a 1998 assessment. The 2006 assessment presents a different picture of the influence of methyl bromide in toto, and of QPS methyl bromide in particular.

The Scientific Assessment report evaluated the most effective additional measures that could be taken to reduce ozone depletion and hasten recovery of the ozone layer. The following table (reproduced from the Executive Summary at 22) indicates the available measures and the percentage reduction in atmospheric loading of ozone-depleting chemicals[1] that would result.

Table 1. Percentage reductions in integrated equivalent effective stratospheric chlorine relative to the baseline (A1) scenario that can be achieved in the hypothetical cases. [1]

Compound or Compound Group	Column A: All Emissions Eliminated from Production after 2006	Column B: All Emissions Eliminated from Existing Banks at End of 2006	Column C: All Emissions Eliminated after 2006
Chlorofluorocarbons (CFCs)	0.3	11	11
Halons	0.5	14	14
Carbon tetrachloride (CCl_4)	3	(a)	3
Methyl chloroform (CH_3CCl_3)	0.2	(a)	0.2
Hydrochlorofluorocarbons (HCFCs)	12	4	16
Methyl bromide (CH_3Br) (anthropogenic)	5	(a)	5

[1] Column A corresponds to a hypothetical elimination of all emissions from production after 2006. Column B corresponds to a hypothetical elimination of all emissions from banks existing at the end of 2006 (for example, capture and destruction). Column C corresponds to a hypothetical elimination of all emissions after 2006 and is approximately equal to the sum of columns A and B.
(a) For these compounds, banks are uncertain and therefore emissions are equated to production in these calculations.

The total elimination of current levels of methyl bromide production at the end of 2006 would reduce future loadings of ozone-depleting chemicals by 5%. This is one of the most effective measures still available to reduce future ozone depletion.

The report specifically examined the impact of exemptions for critical uses of methyl bromide, and for QPS use of methyl bromide. The results indicate that QPS uses will have a much larger impact than acknowledged in the draft supplemental EIS – especially when the growth trend of those uses is taken into account. The Scientific Assessment report first states: "The size of the methyl bromide critical use exemptions is similar to the estimated use of methyl bromide for QPS use." *Id.* at 23. The report then states:

> If critical-use methyl bromide exemptions continue indefinitely at the 2006 level compared to a cessation of these exemptions in 2010 or 2015, midlatitude

[1] The Scientific Assessment uses the metric of "equivalent effective stratospheric chlorine." This is a means of putting chlorinated and brominated compounds on a comparable scale.

integrated equivalent effective stratospheric chlorine would increase by 4.7% or 4.0%, respectively.

> If production of methyl bromide for QPS use were to continue at present levels and cease in 2015, midlatitude integrated equivalent effective stratospheric chlorine would decrease by 3.2% compared with the case of continued production at present levels.

Id. These paragraphs indicate that if QPS use continued indefinitely at its present rate, as compared with a phase-out by 2010 or 2015, something like a 4 to 4.7% increase in the atmospheric loading of ozone-destroying chemicals will result. Conversely, a substantial reduction in atmospheric loading would result if QPS use of methyl bromide could be ended by 2015.

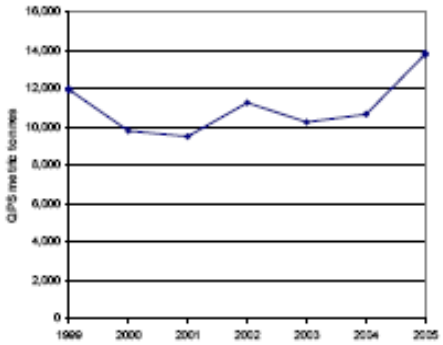
The increase in the atmospheric loading of ozone-destroying chemicals will be worse than the Scientific Assessment anticipated because QPS use of methyl bromide is increasing in response to ISPM15. As discussed below, there has already been a 31% increase in 2005 and a greater increase is expected in 2006, 2007, and subsequent years (*see below).*

C. Increasing QPS Methyl Bromide Production Driven by ISPM15

The draft supplemental EIS makes no reference to the United Nations Environment Program, "2006 Report of the Methyl Bromide Technical Options Committee: 2006 Assessment," available at http://ozone.unep.org/Assessment_Panels/TEAP/Reports/MBTOC/MBTOC-2006-Assessment%20Report.pdf. The Methyl Bromide Technical Options Committee (MBTOC) is the technical body that reports to the Parties to the Montreal Protocol).

The MBTOC Report presents data that global production of methyl bromide for quarantine and preshipment (QPS) purposes jumped sharply in 2005 because of ISPM15, and that further ISPM15-driven increases are expected in 2006 and 2007. In 2005, reported methyl bromide production for QPS was 13,815 metric tons, 37 percent of total reported global methyl bromide production. *Id.* at 57. MBTOC reports further that 2005 QPS production was 31 percent higher than the 1999-2004 average. Figure 3.16, *id.* at 58.

Figure 3.16. Trend in reported global production of MB for QPS, 1999-2005



Source: Database of Ozone Secretariat of November 2006.

The Report states:

> The use of MB for QPS has recently increased in a number of countries as a result of ISPM 15 'Guidelines for Regulating Wood Packaging Material in International Trade' (IPPC, 2002) which came into force in various countries over the period 2004 - 2006 (DAFF, 2007). A further increase can be expected in QPS production for 2006/7 with further implementation of ISPM 15 using methyl bromide.

Id. at 58.

The MBTOC report notes that a revised methyl bromide dosage schedule was adopted for ISPM15 in 2006. Compared with the 2002 version of ISPM15, this did not change the initial methyl bromide concentrations needed, but raised both the exposure period and the retention of gas needed at the end of the fumigation, from 30% at 16 hours to 50% at 24 hours. Anecdotal evidence suggests that some fumigators are increasing the initial charge of methyl bromide to compensate for leakage in order to meet the final concentration requirement, thus avoiding the need to retreat or top up concentrations during the fumigation. Such practices were not required in 2005. *Id.* at 291.

The MBTOC also reports that independent evidence suggested the proportion of QPS fumigation on logs and wooden items may have been underrepresented. *Id.* at 287.

There is some evidence that methyl bromide usage is being driven even higher than one might have anticipated due to import country phytosanitary authorities being uncertain whether packing material was properly treated at the point of export. At the most recent meeting of the Open Ended Working Group under the Montreal Protocol in Nairobi in June 2007, Australia reported that its phyotosanitary authority has been fumigating incoming shipments from Asian countries because they were uncertain whether the shipments were properly treated at the export end.[2] While Australia said it is working to eliminate this double-treatment, APHIS has not accounted for the prevalence of the practice in this country or elsewhere.

Similarly, many pallet users have decided to switch to all export compliant packaging because they don't want to risk having a shipment stopped at a border or do not know where a load is headed when it is palletized. Instead of keeping two inventories of pallets, many users have decided to treat everything. This is especially true for companies with a significant amount of international shipments or fairly expensive products under load. *See* Chaille Brindley, Major World Powers Move To Implement ISPM-15, 5/2/2005, available at http://www.palletenterprise.com/articledatabase/view.asp?articleID=1372

Further, a 2004 IPPC report states: "Exporting countries have tended to implement ISPM-15 in order to ensure compliance with the requirements of the importing country for consignments containing SWPM. This implementation has stimulated the use of MB for QPS.

---

[2] http://ozone.unep.org/Meeting_Documents/oewg/27oewg/OEWG-27-9E.pdf

Non-industrialised countries use QPS-MB as heat treatment chambers and accompanying technology are less available in these countries.") M.B. DeHoop, "Global Protection of Plants and the Environment, The International Plant Protection Convention and Quarantine and Pre-Shipment Applications of Methyl Bromide," Proceedings of International Conference on Alternatives to Methyl Bromide - Lisbon, Portugal, 27-30 September 2004, available at http://ec.europa.eu/environment/ozone/conference/lisboa/proceedings.pdf.

Returning to the overall trend, if the same 31 percent annual rate of increase in methyl bromide usage driven by ISPM15 is maintained in 2006 and 2007, then QPS production could top 20,000 metric tons by the end of 2007, nearly double the 1999-2004 average. This is a very different picture from the false assurances presented in the draft supplemental EIS. It would be a very serious step backwards in ozone layer protection.

As a result of the strong growth in QPS usage driven by ISPM15, APHIS has no rational support for its assertion that QPS methyl bromide related to APHIS's rule represents less than a tenth of a percent "effect" (presumably APHIS means increased atmospheric concentration of ozone-depleting chemicals).

APHIS offers the soothing assertion that the increase in QPS use of methyl bromide is in some way offset by the reductions in other methyl bromide usage accomplished under the Montreal Protocol. That supposed offset effect is not soothing to the Montreal Protocol Parties. Rather, the sharp rate of increase in methyl bromide use driven by ISPM15 has led the Parties to take steps to begin bringing QPS use under control. The Montreal Protocol and the International Plant Protection Convention (IPPC) have begun coordination through their respective secretariats to get better data on ISPM15-driven usage of methyl bromide. The Montreal Parties have adopted Decisions (a) requiring countries to report QPS production and use, (b) encouraging the use of heat treatment and alternative packing materials, and (c) encouraging the IPPC and domestic authorities to approve additional treatment methods.

Further, some Montreal Protocol Parties have made formal proposals to amend the Protocol to end the total exemption for QPS and institute requirements to cap and reduce QPS production and use. If APHIS allows QPS growth related to U.S. imports to continue growing, it is likely that the Meeting of the Parties will adopt such amendments in 2008. In short, by carelessly promoting uncontrolled growth of methyl bromide production and use for ISPM15 purposes, APHIS is courting the establishment of international regulatory limits on all QPS use.

D. Inconsistent and Missing Data on QPS Production and Use

We have already commented that APHIS's data from which its estimates are derived are far from complete and riddled with omissions that preclude assessment of the completeness and accuracy of the QPS usage driven by APHIS's rule. Here is further evidence on this point.

In 2006, an Expert Working Group on Alternatives to Methyl Bromide, operating under the IPPC, reported:

Collection and reporting of QPS usage data

The EWG noted that QPS usage data reported to the Parties to the Montreal Protocol through the Ozone Officer do not necessarily reflect an accurate picture of worldwide QPS usage of methyl bromide. Collection methods are different in each country, difficult to do in many, not done in others, and poor at best when conducted. Much of the usage is based on estimates only. There is no standardized method or procedure that provides for accurate reporting of methyl bromide use under the QPS exemption. The EWG discussed whether it should develop guidelines on how to collect and report accurate and detailed usage data.

Expert Working Group on Alternatives to Methyl Bromide at 3, 30 October - 3 November 2006, Orlando, Florida, available at https://www.ippc.int/servlet/BinaryDownloaderServlet/183954_Report_EWG_Methyl_br.doc?filename=1178634989508_EWG_report_Methyl_bromide_FINAL.doc&refID=183954.

In light of this and prior comments on inconsistent and missing data, APHIS has no apparent rational basis for the assumptions underlying key elements of the equations set forth in Appendix D. Appendix D, of course, is the underpinning of the estimates of methyl bromide usage presented in Tables 3-1 and 3-2 in the body of the draft. Here are a number of specific comments regarding "Method 1" and "Method 2" – which dominate APHIS's total estimates – as set forth in Appendix D:

- At page D-4, "Method I" is described as applying to "Treatment of Assembled WPM in Tarped Containers After Loading of Cargo." It further states: "**Example of Method I –** countries lacking information about fumigation of WPM where fumigation is assessed to occur after loading for 50% of the WPM that is fumigated." These sentences are very confusing. For which countries has APHIS used "Method I"? Why has APHIS assumed that *only 50%* of the wood packing material from these countries is treated in tarped containers after loading?

- Similar concerns arise with "Method 2," described as applying to "Treatment of Assembled WPM in Sealed Containers After Loading of Cargo." This Method apparently was used for China. It is unclear why APHIS has assumed, in "**Example of Method 2**," that only 50% percent of the wood packing is fumigated.

- What is the basis for APHIS's assumption that for imports emanating from Hong Kong – a part of China – all WPM is treated in sealed containers before assembly and cargo loading?

Without answers to these questions, and appropriate changes to APHIS's calculations, Appendix D does not present a rational basis for the methyl bromide usage estimates presented in the body of the draft supplemental EIS.

E. Availability of ozone safe treatment methods

APHIS has considered the option of requiring non-methyl bromide QPS treatment alternatives and phasing out methyl bromide. Most countries that responded to a survey under the Montreal Protocol reported that methyl bromide alternatives were commercially available in their countries. The totals presented in the report suggest that 65% of the MB currently used for QPS purposes could be replaced by technologies that are commercially available in the responding countries. Developing country (Article 5) Parties estimated that 73% of QPS MB use could be replaced by alternative technologies and developed country (non-Article 5) parties reported that 46% could be replaced. S.C. Ogden, Preliminary Results Of An International Survey On The Use Methyl Bromide For Quarantine And Pre-Shipment**,** available at http://ec.europa.eu/environment/ozone/conference/lisboa/proceedings.pdf. As summarized in the table reproduced below from the report, large amounts of methyl bromide for use on wood packaging materials could be replaced by alternatives:

Category	**MB (kg)**	**%MB used by sector**	**MB (kg) for QPS replaceable by alternatives**	**%MB used for QPS replaceable by alternate technology**
Wooden packaging materials	**204,612.16**	**15.42**	**119,549.44**	**58.43**
Wood	**107,791.90**	**8.12**	**100,850**	**93.56**
Whole logs	**59,330.45**	**4.47**	**3,957.80**	**6.67**

The 2006 MBTOC assessment reports that: "On a global basis, there are technically effective and approved treatments available for more than half current QPS treatments by volume of methyl bromide consumed." MBTOC 2006, at 290.

APHIS could drastically reduce or eliminate use of methyl bromide related to imports into this country by revising its domestic regulations to require the use of heat treatment in all circumstances, or at least in without a demonstration that heat treatment is infeasible in the exporting country. Heat treatment is, of course, an approved treatment method under ISPM15. APHIS could require in its own rules the use of this ozone-safe alternative.

The IPPC's Environmental Working Group reports that major reductions in methyl bromide emissions can be achieved by capturing and destroying chemical vented during treatment. The IPPC EWG states that recapture and recovery technologies could be quickly implemented and faster than getting new chemicals registered, the compliance with such technologies is minimal. The EWG states, however, that:

> Recycle and recapture technology for methyl bromide use is not likely to be implemented voluntarily until there are economic incentives available that will foster implementation. . . . .Since there is no limit on the amount of methyl bromide that may be used for quarantine purposes, there are no provisions or allowances for credits for having utilized recapture technology base on the amount of methyl bromide emissions eliminated (recaptured).

IPPC Expert Working Group on Alternatives to Methyl Bromide at 3, 30 October - 3 November 2006, Orlando, USA.

The 2006 MBTOC Assessment states that: "In the absence of regulations, companies reported they would not invest in the systems, because their competitors (who had not made the investment) would then have a cost advantage." (2006 MBTOC Assessment Report, at.17.) APHIS could support making recovery and destruction a requirement under ISPM15.

In addition, APHIS could aggressively seek to amend ISPM15 to approve the use of other pesticides. The 2007 Progress Report of the Technological and Economic Assessment Panel reports:

> In Japan, sulfuryl fluoride (SF) plus methyl isothioscyanate (MITC) and methyl iodide (MI) have been registered for the treatment of timber and packaging materials for products intended for import to Japan. The Japanese government submitted these treatments for consideration for inclusion in ISPM 15 (IPPC 2006) standard for quarantine treatments of wooden packaging materials.

2007 Progress Report at 68, available at http://ozone.unep.org/Assessment_Panels/TEAP/Reports/TEAP_Reports/index.shtml.

ISPM15 itself notes a range of alternatives that could be further evaluated and approved as alternatives to methyl bromide and heat treatment.

As a dominant party in the IPPC, APHIS has a responsibility to undertake the necessary testing and to move the process quickly so that these treatments can be approved if the data warrants. Yet the draft supplemental EIS reveals no effort to explore and approve these alternatives that would obviate the need for methyl bromide.

F. APHIS's continued failure to confront evidence of compromised effectiveness – pest survival after proper treatment, and the prevalence of fraudulent certification

While APHIS rarely defines what it means by "negligible risk" of failed treatment, that term has been defined in two cases that apply to wood. "In the supplemental impact statement covering wood imports from New Zealand and Chile (USDA APHIS 1998a) and in the environmental assessment prepared for the emergency regulation pertaining to wood packaging from China (USDA APHIS 1998b), APHIS accepted a risk level of 3 to 5 percent." According to a paper presented at a USDA-sponsored research forum, "when a 3 to 5 percent risk is applied to the large volume of imports making up the three forest pest pathways, it translates to the probable arrival on our shores of hundreds *of thousands to tens of millions of quarantine pests*." Steps to Minimize Exotic Pest Damage to U.S. Forests, Faith Thompson Campbell and Scott E. Schlarbaum in Proceedings XIV U.S. Department of Agriculture Interagency Research Forum on Gypsy Moth a Other Invasive Species 2003, January 14-17, 2003, available at www.fs.fed.us/ne/newtown_square/publications/technical_reports/pdfs/2004/ne_gtr315.pdf.

Australia has exhibited a high level of concern about treatment failures. Recent interception data collected by the Australian Quarantine and Inspection Service (AQIS) has shown that timber pests continue to be detected in association with wood packaging material that purports to be ISPM15 compliant.

> During the 6793 surveillance inspections of wood packaging material displaying the ISPM 15 stamp (January 1 to November 30, 2005), 19522 crates, dunnage or pallets (pieces) were observed. "Of the 19522 pieces, 1823 or 9.34 % were found to be non-compliant with the ISPM 15 standard and 1749 or 8.96 % exhibited something of quarantine concern. Of this 8.96 % of ISPM 15 wood packaging for which quarantine concerns were identified, 86.4 % had bark, 5.7 % had fungi and mould, and 5.9 % had evidence of live insects. On the basis of total units of wood packaging material inspected, approximately 1 in 200 units had live wood boring insects and 80 % of these insect detections were on wood packaging with bark. These figures are equivalent to Less than Container Load (LCL) survey data collected from 1997 to 1999 (Salvage 1999), except that the proportion of items with bark present has increased for ISPM 15 wood packaging material."

Biosecurity Australia, 2006, Technical Justification for Australia's Requirement for Wood Packaging Material to be Bark Free, at 16 available at http://www.daff.gov.au/_data/assets/pdf_file/0013/12361/2006-13a.pdf.

> At present under ISPM 15, there is no acceptable way to confirm that a certified treatement has been appropriately performed (Burgess, 2005).
>
> * * *
>
> Wood packaging material is difficult to monitor during quarantine inspection procedures. Even when high-risk packing is identified in a shipment, the inspection process is complicated by limited access to visible surfaces (most surfaces are not facing the inspector or the cargo is buried deep in a container) and the cryptic nature of many wood-inhabiting organisms. Latent fungal infections are virtually impossible to detect through inspection of outer wood surfaces. (Allen 2001b.)

Biosecurity Australia, 2006 at 17-18. The Report continues at 20, 28, 41, and 98:

> USDA has released a final environmental impact statement on the importation of solid wood packing material that supports the adoption of the IPPC (2002) standard, although the document indicates some level of concern over the effectiveness of both the methyl bromide treatment and heat treatment (e.g. USDA 2003, pp 24, 51, 60 and 61).
>
> Reviews by Morrell (1995) and Viljoen and Banks (2002) demonstrate that moisture content and bark on wood following harvesting are related and impact upon methyl bromide uptake. There are also considerable differences between methyl bromide fumigation penetration in hardwood and softwood timbers (Ren *et al.* 1997, in Viljoen and Banks 2002). These differences, as well as the

differences in gas penetration in green and dry timber, are not addressed by ISPM 15, which treats all wood as similar and makes no allowance for operational effects.

Pests that attack seasoned wood are more likely to enter the pathway after the ISPM 15 treatment and may continue to do so during the service life of the product. The presence of bark is not regarded as a significant contributing factor in attack by and survival of most invertebrate pests of seasoned wood, except in circumstances where the bark may offer additional protection for any life stages of these pests. The assessment also notes that there is no direction provided under ISPM 15 concerning storage and use of treated material.

In 2001, Australia reported that 22 % of inspected wood consignments coming from the USA and Canada had residual bark, and in 50 % of these live insects or nematodes were found in wood that retains some or all of its bark (especially if there are compliance issues relating to the ISPM 15 treatments.) "Preliminary data from AQIS' current survey (AQIS unpublished data) demonstrates no overall improvement in interception rates of invertebrates as a result of the implementation of ISPM 15."

APHIS has not conducted any similar analysis.

Nor has APHIS assessed the rate of treatment fraud – where wood packing material is stamped as having been treated with heat or methyl bromide, but in fact was treated with neither method. Fraudulently certified wood packing material carries the full pest risk of untreated material. If even a small percentage of shipments are fraudulently certified, the real failure rate is much higher than even the 3 to 5 percent risk referred to above.

As noted above, the District Court opinion did not address the issue that plaintiffs raised regarding the failure to assess the risk of fraudulent certification. This is a matter that will be taken up on appeal. Without waiting to be ordered to do so, however, APHIS should acknowledge and remediate this gross failure in its EIA and the analysis supporting its rule.

G. Conclusion

Thank you for the opportunity to submit these comments. We urge APHIS to fully re-evaluate all of its prior decisions in all respects.

David Doniger
Policy Director, Climate Center
Natural Resources Defense Council

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

JUL 2 2007

Mr. David A. Bergsten, Project Manager
Policy and Program Development
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 141
Riverdale, MD 20737-1236

Re: Importation of Solid Wood Packing Material Draft Supplement to the Final Environmental Impact Statement (SEIS)

Dear Mr. Bergsten:

The U.S. Environmental Protection Agency (USEPA) has reviewed the Draft Supplement to the Final Environmental Impact Statement (SEIS) for "*Importation of Solid Wood Packing Material*" prepared by the Animal and Plant Health Inspection Service (APHIS). Our review is provided under the National Environmental Policy Act (NEPA), Council on Environmental Policy (CEQ) regulations (40 CFR Sections 1500 - 1508) and Section 309 of the Clean Air Act.

APHIS has adopted phytosanitary standards published by the Food and Agriculture Organization of the United Nations. These standards are contained in the International Plant Protection Convention's (IPPC) "Guidelines for Regulating Wood Packaging Material in International Trade" (International Standards for Phytosanitary Measures Number 15 (ISPM 15)). The IPPC Guidelines provide effective, equitable, and uniform standards that all nations would use to mitigate the risk from entry of invasive alien species (pests and pathogens) found in solid wood packaging material (WPM) that accompanies international trade shipments.

The solid WPM SEIS was prepared to reevaluate and refine estimates of methyl bromide release associated with compliance treatments of solid WPM. The SEIS utilized current data and information that is now available to support the effectiveness of the treatments approved under the IPPC guidelines against many pests of concern to APHIS. The SEIS also provides the decision-maker and the public with the most current information and anticipated environmental impact associated with APHIS' WPM regulation.

EPA has no objections to this draft SEIS and APHIS' adoption of the IPPC Guidelines. Accordingly, we have assigned a Lack of Objections (LO) rating to the draft SEIS. Enclosed is a summary of EPA's rating system.

We appreciate the opportunity to review the draft SEIS on the "*Importation of Solid Wood Packing Material.*" If you have any questions, please call me at (202) 564-5400 or the staff contact for this project, Arthur Totten at (202) 564-7164.

Sincerely,

Anne Norton Miller
Director
Office of Federal Activities

Enclosure

EPA's Criteria for Sec. 309 Review of Impact Statements

Rating Environmental Impacts:

LO--Lack of Objections

EC--Environmental Concerns--Impacts identified that should be avoided. Mitigation measures may be required.

EO--Environmental Objections--Significant impacts identified. Corrective measures may require substantial changes to the proposed action or consideration of another alternative, including any that was either previously unaddressed or eliminated from the study, or the no-action alternative). Reasons can include:

- o violation of a federal environmental standard;
- o violation of the federal agency's own environmental standard;
- o violation of an EPA policy declaration;
- o potential for significant environmental degradation; or,
- o precedent-setting for future actions that collectively could result in significant environmental impacts.

EU--Environmentally Unsatisfactory--Impacts identified are so severe that the action must not proceed as proposed. If these deficiencies are not corrected in the final EIS, EPA may refer the EIS to CEQ Reasons, in addition to impacts identified, can include:

- o substantial violation of a federal environmental standard;
- o severity, duration, or geographical extent of impacts that warrants special attention; or,
- o national importance, due to threat to national environmental resources or policies.

Rating Adequacy of the Impact Statement:

1 (Adequate)--No further information is required for review.

2 (Insufficient Information)--Either more information is needed for review, or other alternatives should be evaluated. The identified additional information or analysis should be included in the final EIS.

3 (Inadequate)--Seriously lacking in information or analysis to address potentially significant environmental impacts. The draft EIS does not meet NEPA and/or Section 309 requirements. If not revised or supplemented and provided again as a draft EIS for public comment, EPA may refer the EIS to CEQ.

Appendix B. Preparers

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Policy and Program Development, Environmental Services
4700 River Road
Riverdale, MD 20737

David A. Bergsten
Biological Scientist
B.S. Environmental Science
M.S. Entomology
M.P.H. Disease Control
Ph.D. Toxicology

Background: Biological Scientist in ES with expertise in environmental toxicology, chemical fate, and pesticide research. More than 20 years experience with APHIS including environmental protection, field, and port inspection experience. Experience in preparing environmental documentation for other major APHIS programs, in compliance with Federal statutes.

EIS Responsibility: Project manager for the draft SEIS—wrote parts of the Executive Summary, chapter 1, and chapter 3. Reviewed and contributed to other chapters and to the appendices. Responsible for coordination and team management on final documentation

Elizabeth E. Nelson
Environment Protection Specialist
B.S. Biology
M.S. Healthcare Administration
M.B.A.

Background: Environmental Protection Specialist in ES. Six years of service with APHIS. Experience in environmental compliance, especially those associated with the Endangered Species Act, in the context of trade agreements, pest management, and pesticide regulations. Provides assistance on environmental documentation teams and participates in preparing and reviewing written analyses.

EIS Responsibility: EIS Analyst—contributed to the preparation of the draft SEIS. Wrote parts of the three chapters and reviewed other parts of other chapters and the appendices.

Betsey L. Coakley
Writer/Editor
B.A. Sociology

Background: Over 17 years of service with APHIS, with administrative and clerical experience with Plant Protection and Quarantine, and Policy and Program Development. Currently serving as Writer/Editor with ES.

EIS Responsibility: EIS Editor—desktop publishing of the EIS (including editing, format, and document security).

Appendix C. Cooperation, Review, and Consultation

The following individuals have cooperated in the development of this supplement to the final environmental impact statement (SEIS), were consulted on critical issues that have been addressed in this SEIS, or reviewed draft sections of this supplement. The expertise and concerns of these individuals were considered during the development of this supplement to the FEIS. There may be some aspects of the SEIS or its incorporated analyses which are not endorsed by all of the cooperators and consultants.

Michael Simon
Senior Staff Officer
Quarantine Policy, Analysis and Support
Plant Protection and Quarantine
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 60
Riverdale, MD 20737

Hesham A. Abuelnaga
Import Specialist
Plant Protection and Quarantine
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 133
Riverdale, MD 20737

Allan Auclair
Risk Scientist
Policy and Program Development
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 117
Riverdale, MD 20737

John H. Payne
Acting Director
Plant Health Programs
Plant Protection and Quarantine
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 131
Riverdale, MD 20737

Narcy Klag

Deputy Director
Phytosanitary Issues Management
Plant Protection and Quarantine
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
4700 River Road, Unit 140
Riverdale, MD 20737

Appendix D. Federal Register and Other Notices Regarding Importation of Wood Packaging Material

(This page is intentionally left blank.)

validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the information collection on those who are to respond, through use, as appropriate, of automated, electronic, mechanical, and other collection technologies, *e.g.*, permitting electronic submission of responses.

Estimate of burden: The public reporting burden for this collection of information is estimated to average 0.5 hours per response.

Respondents: U.S. importers of unprocessed bird and poultry products from regions where HPAI subtype H5N1 has been reported, and owners of U.S. origin pet birds and U.S. origin performing or theatrical birds or poultry returning to the United States.

Estimated annual number of respondents : 5,180.

Estimated annual number of responses per respondent: 4.540540541.

Estimated annual number of responses: 23,520.

Estimated total annual burden on respondents: 11,760 hours. (Due to averaging, the total annual burden hours may not equal the product of the annual number of responses multiplied by the reporting burden per response.)

All responses to this notice will be summarized and included in the request for OMB approval. All comments will also become a matter of public record.

Done in Washington, DC, this 21st day of May 2007.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. E7–10106 Filed 5–24–07; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. APHIS–2006–0152]

Supplemental Environmental Impact Statement for Importation of Solid Wood Packing Material

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice; reopening of comment period for supplemental environmental impact statement.

SUMMARY: We are reopening the comment period for the supplemental environmental impact statement prepared for the Importation of Solid Wood Packing Material Final Environmental Impact Statement. This action will allow interested persons additional time to prepare and submit comments.

DATES: We will consider all comments that we receive on or before June 25, 2007.

ADDRESSES: You may submit comments by either of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov*, select ''Animal and Plant Health Inspection Service'' from the agency drop-down menu, then click ''Submit.'' In the Docket ID column, select APHIS–2006–0152 to submit or view public comments and to view supporting and related materials available electronically. Information on using Regulations.gov, including instructions for accessing documents, submitting comments, and viewing the docket after the close of the comment period, is available through the site's ''User Tips'' link.
- *Postal Mail/Commercial Delivery:* Please send four copies of your comment (an original and three copies) to Docket No. APHIS–2006–0152, Regulatory Analysis and Development, PPD, APHIS, Station 3A–03.8, 4700 River Road Unit 118, Riverdale, MD 20737–1238. Please state that your comment refers to Docket No. APHIS–2006–0152.

Reading Room: You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue, SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690–2817 before coming.

Other Information: Additional information about APHIS and its programs is available on the Internet at *http://www.aphis.usda.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. David A. Bergsten, APHIS Interagency NEPA Contact, Environmental Services, PPD, APHIS, 4700 River Road, Unit 149, Riverdale, MD 20737–1238; (301) 734–6103.

SUPPLEMENTARY INFORMATION:

Background

On October 24, 2006, the Animal and Plant Health Inspection Service (APHIS) published in the **Federal Register** (71 FR 62240, Docket No. APHIS–2006–0152) a notice of its intention to prepare a supplemental environmental impact statement (SEIS) for the Importation of Solid Wood Packing Material Final Environmental Impact Statement, August 2003 (FEIS). The purpose of the SEIS is to reevaluate and refine the estimates of methyl bromide usage associated with the alternatives considered in the FEIS. On March 9, 2007, the Environmental Protection Agency published in the **Federal Register** (72 FR 10749) a notice of the availability of the SEIS.

Comments on the SEIS were required to be received on or before April 23, 2007. We are reopening the comment period on the SEIS for an additional 30 days. This action will allow interested persons additional time to prepare and submit comments. We will also consider all comments received between April 24, 2007 (the day after the close of the original comment period) and the date of this notice.

Authority: 7 U.S.C. 450 and 7701–7772 and 7781–7786; 21 U.S.C. 136 and 136a; 7 CFR 2.22, 2.80, and 371.3.

Done in Washington, DC, this 21st day of May 2007.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. E7–10107 Filed 5–24–07; 8:45 am]

BILLING CODE 3410–34–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List Additions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Additions to Procurement List.

SUMMARY: This action adds to the Procurement List services to be furnished by nonprofit agencies employing persons who are blind or have other severe disabilities.

DATES: *Effective Date:* June 24, 2007.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, Jefferson Plaza 2, Suite 10800, 1421 Jefferson Davis Highway, Arlington, Virginia 22202–3259.

FOR FURTHER INFORMATION CONTACT: Kimberly M. Zeich, Telephone: (703) 603–7740, Fax: (703) 603–0655, or e-mail *CMTEFedReg@jwod.gov*.

SUPPLEMENTARY INFORMATION: On March 30, 2007, the Committee for Purchase From People Who Are Blind or Severely Disabled published notice (72 FR 15097–15098) of proposed additions to the Procurement List.

After consideration of the material presented to it concerning capability of qualified nonprofit agencies to provide

Highway Component, from I–130 to Louis Armstrong International Airport, to Central Business District (CBD), Jefferson, Orleans and St. Charles Parishes, LA.

Summary: No formal comment letter was sent to the preparing agency.

EIS No. 20070013, ERP No. F–DOE–E01016–FL, Orlando Gasification Project (DOE/EIS–0383), To Provide Cost-Shared Funding for Construction, Design, and Operation a New Plant, Orlando, FL.

Summary: EPA continues to have environmental concerns about impacts to air quality and wetlands, and requested that additional mitigation measures be implemented.

EIS No. 20070020, ERP No. F–AFS–L65474–AK, Tuxekan Island Timber Sale(s) Project, Timber Harvesting, Implementation, Coast Guard Bridge Permit, U.S. Army COE Section 10 and 404 Permits, Tongass National Forest, Thorne Bay Ranger District, Thorne Bay, AK.

Summary: EPA's previous environmental concerns about impacts to water quality, fisheries, wetlands, and wildlife habitat have been addressed; therefore, EPA does not object to the proposed action.

EIS No. 20070034, ERP No. F–SFW–J65447–WY, Bison and Elk Management Plan, Implementation, National Elk Refuge/Grand Teton National Park/John D. Rockefeller, Jr. Memorial Parkway, Teton County, WY.

Summary: No formal comment letter was sent to the preparing agency.

EIS No. 20070054, ERP No. F–NPS–J61110–UT, Utah Museum of Natural History, Construction and Operation, New Museum Facility at University of Utah, Salt Lake City, UT.

Summary: No formal comment letter was sent to the preparing agency.

Dated: March 6, 2007.

Robert W. Hargrove,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. E7–4246 Filed 3–8–07; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–6684–7]

Environmental Impacts Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–7167 or *http://www.epa.gov/compliance/nepa/*.

Weekly receipt of Environmental Impact Statements

Filed 02/26/2007 through 03/02/2007 pursuant to 40 CFR 1506.9.

EIS No. 20070072, Second Draft Supplement, FHW, NC, NC 12 Replacement of Herbert C. Bonner Bridge (Bridge No. 11) Revisions and Additions, over Oregon Inlet Construction, Funding, U.S. Coast Guard Permit, Special-Use-Permit, Right-of-Way Permit, U.S. Army COE Section 10 and 404 Permit, Dare County, NC , *Comment Period Ends:* 04/23/2007, *Contact:* John F. Sullivan 919–856–4346.

EIS No. 20070073, Draft EIS, IBR, CO, Colorado River Interim Guidelines for Lower Basin Shortages and and Coordinated Operations for Lake Powell and Lake Mead, Implementation, Colorado River, CO, *Comment Period Ends:* 04/30/2007, *Contact:* Nan Yoder 702–293–8500.

EIS No. 20070074, Final EIS, SFW, CA, East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan, Implementation, Incidental Take Permit, Cities of Brentwood, Clayton, Oakley and Pittsburg, Contra Costa County, CA, *Wait Period Ends:* 04/09/2007, *Contact:* Lori Rinek 916–444–6600.

EIS No. 20070075, Draft Supplement, APH, 00, Importation of Solid Wood Packing Material, To Reevaluate and Refine Estimates of Methyl Bromide Usage in the Treatment, Implementation, United States, *Comment Period Ends:* 04/23/2007, *Contact:* David A. Bergston 301–734–6103.

EIS No. 20070076, Final EIS, AFS, WI, Boulder Project, Timber Harvesting, Vegetation and Road Management, U.S. Army COE Section 404 Permit, Chequamegon-Nicolet National Forest, Lakewood-Laona Ranger District, Oconto and Langlade Counties, WI, *Wait Period Ends:* 04/09/2007, *Contact:* Paul Sweeney 715–276–6333.

EIS No. 20070077, Draft EIS, AFS, SD, Mitchell Project Area, To Implement Multiple Resource Management Actions, Mystic Ranger District, Black Hills National Forest, Pennington County, SD, *Comment Period Ends:* 04/23/2007, *Contact:* Roberts. J. Thompson 605–343–1567.

EIS No. 20070078, Draft EIS, NPS, NY, Sagamore Hill National Historic Site, General Management Plan, Implementation, Oyster Bay, Nassau County, NY, *Comment Period Ends:* 05/08/2007, *Contact:* Greg A. Marshall 516–922–4452.

EIS No. 20070079, Draft Supplement, AFS, WA,. School Fire Salvage Recovery Project, To Clarify Definitions of Live and Dead Trees, Implementation, Pomeroy Ranger District, Umatilla National Forest, Columbia and Garfield Counties, WA, *Comment Period Ends:* 04/23/2007, *Contact:* Dean R. Millett 509–843–4644.

EIS No. 20070080, Draft EIS, NIG, CA, Graton Rancheria Casino and Hotel Project, Transfer of Land into Trust, Implementation, Federated Indians of Graton Rancheria (Tribe), Sonoma County, CA, *Comment Period Ends:* 04/23/2007, *Contact:* Brad Meharry 202–632–7003.

EIS No. 20070081, Final EIS, JUS, TX, Laredo Detention Facility, Proposed Contractor-Owned/Contractor-Operated Detention Facility, Implementation, Webb County, TX, *Wait Period Ends:* 04/09/2007, *Contact:* Scott P. Stermer 202–353–4601.

EIS No. 20070082, Final EIS, GSA, VA, Federal Bureau of Investigation (FBI) Central Records Complex, Alternative 4—Sempeles Site, Winchester, Frederick County, VA, *Wait Period Ends:* 04/09/2007, *Contact:* Katrina Scarpato 215–446–4651.

EIS No. 20070083, Draft EIS, SFW/COE, CA, PROGRAMMATIC—South Bay Salt Pond Restoration Project, Restored Tidal Marsh, Managed Ponds, Flood Control Measures and Public Access Features, Don Edward San Francisco Bay National Wildlife Refuge, Alameda, Santa Clara and San Mateo Counties, CA, *Comment Period Ends:* 04/23/2007, *Contact:* Clyde Morris 510–792–0222 (SFW); and Yvonne LeTellier, 415–503–6744 (COE).

EIS No. 20070084, Draft EIS, BPA, WA, Port Angeles—Juan de Fuca Transmission Project, Construct a 550-Megawatt Direct Current Cable from Victoria, British Columbia, across the Strait of Juan de Fuca to Port Angeles, Presidential Permit, Clallam County, WA, *Comment Period Ends:* 04/24/2007, *Contact:* Stacy Mason 503–230–5455.

EIS No. 20070085, Draft EIS, USN, GU, Kilo Wharf Extension (MILCON P–52), To Provide Adequate Berthing Facilities for Multi-Purpose Dry Cargo/Ammunition Ship (the T–AKE), Apra Harbor Naval Complex, Mariana Island, GU, *Comment Period Ends:* 04/23/2007, *Contact:* Nora Macariola 808–472–1402.

EIS No. 20070086, Final EIS, USA, VA, Fort Lee, Virginia and Fort A. P. Hill, Virginia Project, Implementation of Base Closure and Realignment (BRAC)

Recommendations and Other Army Actions, Prince George County, Petersburg, Virginia Hopewell, Virginia; Caroline County, Essex County, VA, *Wait Period Ends:* 04/09/2007, *Contact:* Karen Wilson 703–602–2861.

EIS No. 20070087, Final EIS, FTA, FL, Miami North Corridor Project, Build Alternative is Selected, Transit Improvement between NW 62 Street at Dr. Martin Luther King Jr. Station and NW 215th Street at the Dade/Broward Counties Line, Funding, Dade County, FL, *Wait Period Ends:* 04/09/2007, *Contact:* James Garland 404–562–3512.

Dated: March 6, 2007.

Robert W. Hargrove,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. E7–4247 Filed 3–8–07; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2007–0118; FRL–8117–5]

Experimental Use Permit; Receipt of Application

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces receipt of an application 75624–EUP–E from The Acta Group, on behalf of Circle One Global, Inc., requesting an experimental use permit (EUP) for *Aspergillus flavus* NRRL 21882. The Agency has determined that the application may be of regional and national significance. Therefore, in accordance with 40 CFR 172.11(a), the Agency is soliciting comments on this application.

DATES: Comments must be received on or before April 9, 2007.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPP–2007–0118 by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the on-line instructions for submitting comments.
- *Mail*: Office of Pesticide Programs (OPP) Regulatory Public Docket (7502P), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001.
- *Delivery*: OPP Regulatory Public Docket (7502P), Environmental Protection Agency, Rm. S–4400, One Potomac Yard (South Building), 2777 S. Crystal Drive, Arlington, VA. Deliveries are only accepted during the Docket's normal hours of operation (8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays). Special arrangements should be made for deliveries of boxed information. The Docket telephone number is (703) 305–5805.

Instructions: Direct your comments to docket ID number EPA–HQ–OPP–2007–0118. EPA's policy is that all comments received will be included in the docket without change and may be made available on-line at *http://www.regulations.gov*, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through regulations.gov or e-mail. The Federal regulations.gov website is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the docket index available in regulations.gov. To access the electronic docket, go to *http://www.regulations.gov*, select ''Advanced Search,'' then ''Docket Search.'' Insert the docket ID number where indicated and select the ''Submit'' button. Follow the instructions on the regulations.gov web site to view the docket index or access available documents. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either in the electronic docket at *http://www.regulations.gov*, or, if only available in hard copy, at the OPP Regulatory Public Docket in Rm. S–4400, One Potomac Yard (South Building), 2777 S. Crystal Drive, Arlington, VA. The hours of operation of this Docket Facility are from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The Docket telephone number is (703) 305–5805.

FOR FURTHER INFORMATION CONTACT: Shanaz Bacchus, Biopesticides and Pollution Prevention Division (7511P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001; telephone number: (703) 308–8097; e-mail address: *bacchus.shanaz@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

This action is directed to the public in general. This action may, however, be of interest to to those persons who are interested in agricultural biotechnology or may be required to conduct testing of pesticidal substances under the Federal Food, Drug, and Cosmetic Act (FFDCA) or the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

B. What Should I Consider as I Prepare My Comments for EPA?

1. *Submitting CBI*. Do not submit this information to EPA through regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments*. When submitting comments, remember to:

i. Identify the document by docket ID number and other identifying information (subject heading, **Federal Register** date and page number).

cherimoya, soursop, custard apple, sugar apple, and atemoya from Grenada; coconut fruit with milk and husk from Mexico; pitaya from Mexico; melon and watermelon from certain countries in South America; watermelon, squash, cucumber, oriental melon, and grapes from the Republic of Korea.

Before entering the United States, all of these fruits and vegetables are subject to inspection and disinfection at their port of first arrival to ensure that no plant pests are inadvertently brought into the United States. These precautions, along with other requirements, help ensure that these commodities do not introduce exotic plant pests, such as fruit flies, into the United States.

The regulations require the use of certain information collection activities, including import permits, phytosanitary certificates, fruit fly monitoring records, and box labeling.

We are asking the Office of Management and Budget (OMB) to approve our use of these information collection activities for an additional 3 years. After approval of the burden associated with this extension notice, OMB will combine it with another information collection, also titled ''Importation of Fruits and Vegetables (number 0579–0128),'' and the Department will retire number 0579–0236.

The purpose of this notice is to solicit comments from the public (as well as affected agencies) concerning our information collection. These comments will help us:

(1) Evaluate whether the collection of information is necessary for the proper performance of the functions of the Agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of our estimate of the burden of the information collection, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the information collection on those who are to respond, through use, as appropriate, of automated, electronic, mechanical, and other collection technologies, e.g., permitting electronic submission of responses.

Estimate of burden: The public reporting burden for this collection of information is estimated to average 0.1320 hours per response.

Respondents: U.S. importers of fruits and vegetables and plant health officials of exporting countries.

Estimated annual number of respondents: 141.

Estimated annual number of responses per respondent: 5.5319.

Estimated annual number of responses: 780.

Estimated total annual burden on respondents: 103 hours. (Due to averaging, the total annual burden hours may not equal the product of the annual number of responses multiplied by the reporting burden per response.)

All responses to this notice will be summarized and included in the request for OMB approval. All comments will also become a matter of public record.

Done in Washington, DC, this 18th day of October 2006.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. E6–17772 Filed 10–23–06; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. APHIS–2006–0152]

Supplemental Environmental Impact Statement for Importation of Solid Wood Packing Material

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice of intent.

SUMMARY: We are advising the public that a supplemental environmental impact statement will be prepared by the Animal and Plant Health Inspection Service to analyze methyl bromide usage associated with regulatory requirements for importing solid wood packing material into the United States. That document will serve as a supplement to the Importation of Solid Wood Packing Material Final Environmental Impact Statement, August 2003.

FOR FURTHER INFORMATION CONTACT: Mr. David A. Bergsten, APHIS Interagency NEPA Contact, Environmental Services, PPD, APHIS, 4700 River Road, Unit 149, Riverdale, MD 20737–1238; (301) 734–6103.

SUPPLEMENTARY INFORMATION: The Animal and Plant Health Inspection Service (APHIS) intends to prepare a supplemental environmental impact statement (SEIS) for the Importation of Solid Wood Packing Material Final Environmental Impact Statement, August 2003 (FEIS). The purpose of the SEIS is to reevaluate and refine the estimates of methyl bromide usage associated with the alternatives considered in the FEIS.

APHIS published in the **Federal Register** on September 16, 2004 (69 FR 55719–55733, Docket No. 02–032–3), a final rule amending the regulations for the importation of unmanufactured wood articles to adopt an international standard entitled ''Guidelines for Regulating Wood Packaging Material in International Trade.'' The FEIS was prepared with regard to that final rule in compliance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*), and its implementing regulations.

APHIS will base the SEIS on recently obtained, reliable data regarding how various countries have complied with the final rule and with the International Plant Protection Convention Guidelines (IPPC Guidelines) on which the final rule was based. These data include reports from different countries on whether cargo is routinely fumigated along with wood packaging material (WPM), which would result in more methyl bromide usage, or whether WPM is fumigated separately from cargo, which would result in less methyl bromide usage. We also have new data on the extent to which various countries have chosen to comply with the IPPC Guidelines by heat treating WPM rather than fumigating it.

The SEIS will be prepared in accordance with: (1) NEPA, (2) regulations of the Council on Environmental Quality for implementing the procedural provisions of NEPA (40 CFR parts 1500–1508), (3) USDA regulations implementing NEPA (7 CFR part 1), and (4) APHIS' NEPA Implementing Procedures (7 CFR part 372).

When APHIS has completed a draft SEIS, a notice announcing its availability and an invitation to comment on it will be published in the **Federal Register**.

Done in Washington, DC, this 18th day of October 2006.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. E6–17773 Filed 10–23–06; 8:45 am]

BILLING CODE 3410–34–P

Rules and Regulations

Federal Register
Vol. 69, No. 179
Thursday, September 16, 2004

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Part 319

[Docket No. 02–032–3]

RIN 0579–AB48

Importation of Wood Packaging Material

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are amending the regulations for the importation of unmanufactured wood articles to adopt an international standard entitled "Guidelines for Regulating Wood Packaging Material in International Trade" that was approved by the Interim Commission on Phytosanitary Measures of the International Plant Protection Convention on March 15, 2002. The standard calls for wood packaging material to be either heat treated or fumigated with methyl bromide, in accordance with the Guidelines, and marked with an approved international mark certifying treatment. This change will affect all persons using wood packaging material in connection with importing goods into the United States.

EFFECTIVE DATE: September 16, 2005.

FOR FURTHER INFORMATION CONTACT: Mr. William Aley, Senior Import Specialist, Phytosanitary Issues Management Team, PPQ, APHIS, 4700 River Road Unit 140, Riverdale, MD 20737–1236; (301) 734–5057.

SUPPLEMENTARY INFORMATION:

Background

Logs, lumber, and other unmanufactured wood articles imported into the United States pose a significant hazard of introducing plant pests, including pathogens, detrimental to agriculture and to natural, cultivated, and urban forest resources. The regulations in 7 CFR 319.40–1 through 319.40–11 (referred to below as the regulations) contain provisions to mitigate plant pest risk presented by the importation of logs, lumber, or other unmanufactured wood articles.

The regulations restrict the importation of many types of wood articles, including wooden packaging material such as pallets, crates, boxes, and pieces of wood used to support or brace cargo. The regulations currently refer to these types of wood packaging material as solid wood packing material (SWPM), defined as "[w]ood packing materials other than loose wood packing materials, used or for use with cargo to prevent damage, including, but not limited to, dunnage, crating, pallets, packing blocks, drums, cases, and skids." Introductions into the United States of exotic plant pests such as the pine shoot beetle *Tomicus piniperda* (Scolytidae) and the Asian longhorned beetle *Anaplophora glabripennis* (Cerambycidae) have been linked to the importation of SWPM. These and other plant pests that are carried by some imported SWPM pose a serious threat to U.S. agriculture and to natural, cultivated, and urban forests.

Beyond the threat to the United States, the introduction of pests associated with SWPM is a worldwide problem. Because SWPM is very often reused, recycled or remanufactured, the true origin of any piece of SWPM is difficult to determine and thus its phytosanitary status cannot be ascertained. This often precludes national plant protection organizations from conducting useful specific risk analyses focused on the pests associated with SWPM of a particular type or place of origin, and imposing particular mitigation measures based on the results of such analysis. For this reason, there is a need to develop globally accepted measures that may be applied to SWPM by all countries to practically eliminate the risk for most quarantine pests and significantly reduce the risk from other pests that may be associated with the SWPM. In the case of phytosanitary standards, the international standard-setting organization is the International Plant Protection Convention (IPPC).

In a proposed rule published in the **Federal Register** on May 20, 2003 (68 FR 27480–27491; Docket No. 02–032–2), the Animal and Plant Health Inspection Service (APHIS) proposed to amend the regulations to decrease the risk of SWPM introducing plant pests into the United States by adopting the international phytosanitary standard [1] for wood packaging material (referred to below as the IPPC Guidelines) that was approved by the IPPC on March 15, 2002. We proposed to apply the standard to wood packaging material from all places, including China, and to remove the special provisions for wood packaging material from China in 7 CFR 319.40–5(g) through (k).

The IPPC Guidelines were developed after the IPPC determined that worldwide, the movement of SWPM made of unprocessed raw wood is a pathway for the introduction and spread of a variety of pests (IPPC Guidelines, p. 5). The IPPC Guidelines list the major categories of these pests, and establish a heat treatment and a fumigation treatment determined to be effective against them (IPPC Guidelines, p. 10). We proposed to adopt the IPPC Guidelines because they represent the current international standard determined in 2002 to be necessary and effective for controlling pests in SWPM. The need to adopt the IPPC Guidelines is further supported by analysis of pest interceptions at U.S. ports that show an increase in dangerous pests associated with certain SWPM. This increase in pests was found in SWPM that does not meet the IPPC Guidelines (*e.g.*, SWPM from everywhere except China). There has been a decrease in pests associated with SWPM material from China since we began requiring that material be treated prior to importation.

Another reason to adopt the IPPC Guidelines at this time is that adopting them would simplify and standardize trade requirements. China, Canada, the European Union, and many other countries are preparing to implement the IPPC Guidelines requirements. Given the difficulty of identifying the source of SWPM and the recycling of SWPM in trade, successful reduction of the pest risk posed by SWPM requires

[1] "International Standards for Phytosanitary Measures: Guidelines for Regulating Wood Packaging Material in International Trade," Secretariat of the International Plant Protection Convention, Food and Agriculture Organization of the United Nations, Rome: 2002.

all trading partners to take action on a similar timeline.

Furthermore, adopting a uniform international standard means that U.S. companies will not need to comply with one set of SWPM requirements for goods exported from the United States and another set of requirements for goods imported into the United States. Companies engaged in both import and export would have particular difficulties in ensuring that their SWPM supply chain is sorted and routed to comply with differing requirements for different destinations. After this final rule takes effect, these companies will be able to use SWPM that complies with the Guidelines for both import and export purposes, leveling the trade playing field with regard to SWPM. Using SWPM that has been treated and marked in accordance with the Guidelines will also reduce the practice, common in trade today, of re-treating SWPM immediately prior to its reuse to assure the receiving country that treated SWPM is used with a shipment. This reduction in re-treatment will reduce costs to importers and procedural burdens for national plant protection agencies, and will also reduce unnecessary emissions of methyl bromide associated with such unnecessary re-treatment.

We accepted comments on the proposed rule for 60 days, ending July 21, 2003. We also accepted comments at three public hearings held in Seattle, WA, on June 23, 2003; in Long Beach, CA, on June 25, 2003; and in Washington, DC, on June 27, 2003. During the comment period we received approximately 970 comments on the proposal, including approximately 905 slight variants of a single e-mail form letter. The issues raised in these comments are discussed below.

As a result of our review of comments, we have decided to make the following changes from the proposal in this final rule:

- We are changing the term "solid wood packing material" to "wood packaging material" throughout the regulations; and
- We are excluding from the definition of wood packaging material, and thereby excluding from treatment requirements, pieces of wood that are less than 6 mm (0.24 in) in any dimension, because pieces of wood of this size are too thin to present any significant pest risk.

Comments have also led APHIS to make some changes in our plans and schedule for implementing the final rule. No changes to the text of the rule were necessary in response to these comments. Changes we made to the rule and to our implementation plans are discussed below in detail.

Summary and Analysis of Comments

More than 95 percent of the comments applauded the intent of APHIS to protect United States forest and agricultural resources against the danger represented by pests associated with wood packaging material. However, the same commenters were concerned that the proposed rule would not adequately protect our forests from plant pests like the Asian longhorned beetle and were concerned that the proposal would cause other harm to the environment, namely increased depletion of the ozone layer due to use of methyl bromide as a fumigant. These commenters urged APHIS not to adopt the proposed rule, but to look for alternatives that will fully protect the United States from wood-borne invasive species while not sacrificing the ozone layer. These commenters suggested that one option would be to phase out the use of wood packaging material and replace it with manufactured wood and plastic crates and pallets, which the commenters suggested would be free of pest dangers and could be reused for a long time.

A number of commenters supported adoption of the IPPC Guidelines, but suggested a variety of exemptions for particular articles, or modifications of import clearance procedures, in order to minimize adverse effects of implementing the IPPC Guidelines. Several commenters also suggested that the regulation should be implemented on a delayed basis, or on a scheduled phase-in with several incremental levels, in order to give importers and other businesses time to adjust to the new requirements.

Several commenters made comments about the effectiveness or availability of the fumigation and heat treatments contained in the IPPC Guidelines, or suggested alternative treatments.

Several commenters addressed the international standard mark that we proposed should be placed on every piece of wood packaging material that has been treated in accordance with the regulations. Some of these commenters suggested that it was not practical to apply the mark to all packaging materials, especially materials such as dunnage that are specially cut to support cargo.

APHIS has carefully considered all the comments, suggestions, requests for clarification, and concerns raised by commenters. Several modifications have been made in this final rule in response to the comments. In the next section we provide detailed responses to the issues raised by commenters, and explain the modifications made in response to these comments.

Terminology

Comment: APHIS regulations refer to the materials being regulated as solid wood packing materials (SWPM), but the IPPC Guidelines uses the term wood packaging material (WPM). It would be less confusing if APHIS used the term wood packaging material, since this is the preferred term in international commerce and in the IPPC Guidelines that many other countries are adopting.

Response: We agree, and throughout our regulations we are changing the term solid wood packing materials (SWPM) to wood packaging material (WPM).

In the proposal, APHIS did not use the term "wood packaging material" for two reasons. Our existing regulations have used the alternate term "solid wood packing materials" for more than 8 years, and persons applying our regulations are familiar with the term. Also, in the IPPC Guidelines the term wood packaging material is defined as "Wood or wood products (excluding paper products) used in supporting, protecting or carrying a commodity (includes dunnage)." This definition is broader than the APHIS term solid wood packing material. WPM as defined by the IPPC includes manufactured wood such as plywood, veneer, and fiberboard, as well as loose wood materials such as shavings and excelsior. The IPPC Guidelines then distinguish between types of WPM that should be regulated because they present a risk (*e.g.*, raw wood pallets and dunnage), and types that should not be regulated because they present little risk (*e.g.*, manufactured wood and shavings).

We thought this approach was ungainly when used in regulations, and that it would be better to use a different term (SWPM) that applied only to the types of wooden materials used in packing that we wanted to regulate. Upon further consideration, we agree that the benefits of using the term WPM outweigh the advantages of using the term SWPM. However, while the definition of WPM in our regulations will match the definition used in the IPPC Guidelines, we will also add a definition of *regulated wood packaging material*. The definition of this new term includes only the types of WPM we consider to be regulated articles. The new definition of regulated WPM closely resembles our current definition of SWPM, and reads as follows: "Wood packing materials other than manufactured wood materials, loose

wood packing materials, and wood pieces less than 6 mm (0.24 in) thick in any dimension, that are used or that are for use with cargo to prevent damage, including, but not limited to, dunnage, crating, pallets, packing blocks, drums, cases, and skids." Therefore, in our regulations WPM refers to the type of articles covered by the IPPC Guidelines definition of WPM, and regulated WPM refers to the type of articles that the IPPC Guidelines refer to in their section on "Regulated Wood Packaging Material."

This definition of regulated WPM differs from the existing definition of SWPM in that it explicitly excludes manufactured wood materials, such as fiber board, plywood, whisky and wine barrels, and veneer. APHIS has never regulated such materials, but the definition of SWPM did not make that clear. The definition of regulated WPM also excludes pieces of wood that are less than 6 mm in any dimension. Pieces of wood of this size are excluded because they are too thin to present any significant pest risk, and because the IPPC Guidelines suggest the 6 mm threshold for excluding wood pieces from regulation. This exclusion will exempt from regulation many types of small boxes used to ship fruit or other articles.

Phasing Out WPM in Favor of Manufactured Materials

Comment: APHIS should look for alternatives that will fully protect the United States from wood-borne invasive species while not sacrificing the ozone layer by encouraging methyl bromide fumigation. One such option would be to phase out the use of WPM and replace it with manufactured wood and plastic crates and pallets, which would be free of pest dangers and could be re-used for a long time.

Response: APHIS has considered many alternatives to diminish pest risk from WPM. Many commenters have suggested that APHIS reduce worldwide methyl bromide emissions by relying instead on one of two pest reduction alternatives, either requiring heat treatment of WPM, or banning use of unmanufactured WPM and requiring use of manufactured wood, plastic, metal, or other alternative packing materials.

In keeping with our commitments to the objectives of the Montreal Protocol, APHIS actively cooperates with other agencies and institutions to identify and validate technically and economically feasible alternatives to methyl bromide. Also, as the agency responsible for representing the United States to the International Plant Protection Convention with respect to the international phytosanitary standards established by the IPPC, APHIS will work closely with current initiatives within the IPPC to develop alternative treatments to methyl bromide and will strive to have any validated treatments incorporated into future revisions of the IPPC Guidelines. APHIS will also be working independently to evaluate and consider treatment alternatives to methyl bromide, and communicate this information through the proper channels in IPPC for technical review and approval. Whenever either APHIS independent evaluations or revisions to IPPC Guidelines make such validated alternatives available, APHIS will make the necessary changes to its quarantine regulations and procedures to provide for their use.

A comprehensive review of the IPPC Guidelines is due to be initiated under the IPPC by 2007. The United States intends to participate in, and bring to bear our technical and research expertise on, this review within the IPPC to ensure alternatives are continually examined and given due consideration. The IPPC Guidelines itself recognizes that phosphine and CPI methods are particularly worth revisiting with respect to the availability of data related to the efficacy of these methods in treating target pests for wood packaging material.

Methyl bromide as a class I ozone-depleting substance has been found to cause or contribute significantly to harmful effects on the stratospheric ozone layer and has adverse atmospheric effects substantially greater than those associated with the alternatives of heat treatment of WPM or use of alternative packing materials. Whenever APHIS advises on treatment alternatives, we encourage use of heat treatment or alternative packing materials in preference to methyl bromide fumigation. At present, it appears that manufacturers in many countries, including the European Union and the United States, prefer to use only heat treatment for the WPM they produce. Trends suggest substitution of heat treatment for methyl bromide will continue to grow. However, during development of the IPPC Guidelines some developing nations advised against allowing only heat treatment and not methyl bromide as an allowed treatment on the grounds that the higher cost of heat treatment makes it economically unfeasible for these countries at this time.

Regarding alternative packing materials, the final environmental impact statement (FEIS) concluded (pp. 79–80) that these would achieve the greatest possible reduction in risk from the introduction of pests and pathogens associated with WPM. While heat treating or fumigating WPM are also both highly efficacious in controlling risk, use of alternative packing materials reduces risk even more. The manufacture and use of alternative packing materials also generates only minimal amounts of ozone-depleting chemicals. However, fumigation of WPM with methyl bromide and heat treatment of WPM are currently the most economical means of producing safe packing materials. Alternative packing materials cost much more. In addition to a cost that is currently beyond the reach of exporters in many developing countries, recovery and reuse of alternative packing materials requires a more complex infrastructure than is required by reuse of WPM. Finally, there are some costs associated with the durability of alternative materials. While many metal, plastic, and manufactured wood alternatives are very durable and can be used for more shipments than typical WPM, some alternative packing materials, such as particle board, are limited in their ability to withstand the conditions that routinely occur during transport.

It is difficult to quantitatively compare the costs of requiring alternative packing materials to the benefits that would accrue from their use. The FEIS and the economic analysis for this rule do estimate costs to exporters of using substitute packing materials and compare these to the cost of heat treatment or methyl bromide fumigation. However, we are unable to realistically estimate the benefits that could result using substitute materials. None of the commenters suggested methods or provided data to do such analysis.

APHIS will continue to encourage use of alternative packing materials by exporters for whom they are economically feasible. There is incentive for the shipping industry to contain costs of packing material, and by requiring treatment of WPM, this rule will slightly increase the average cost of WPM. This increase in the cost of WPM may actually provide incentive to some exporters to seek cost-effective alternatives such as corrugated board, veneer, oriented strand board, and plywood.

In choosing among alternatives, APHIS looks for choices that are both technically and economically feasible. Since treated WPM does provide an acceptable level of protection against pests, we believe that it is not necessary to exclude unmanufactured wood from use as packaging material for imported

cargo. Properly treated WPM is a safe packaging material that can be reused many times and that causes minimal environmental impacts when disposed of or recycled.

On the other hand, prohibiting the use of unmanufactured wood as a packaging material would have significant negative consequences in economic and environmental arenas. Wood is often the only packaging material readily and cheaply available (either through domestic production or importation) in developing countries that export basic products without elaborate packaging. The major alternative materials for packaging are processed wood, plastic, and metal. Pallets or crates made from these materials cost from two to four times more than WPM.

Comment: The APHIS proposal is of uncertain effectiveness and will result in damage to the stratospheric ozone layer, and APHIS therefore should adopt a regulation that specifies a deadline by which all incoming packaging must be made from materials other than solid wood or boards. These commenters stated that this strategy would achieve all three national goals at stake in this rule: Accommodating rising trade volumes, protecting forests from exotic pests, and protecting the stratospheric ozone layer.

Several commenters also stated that APHIS should require use of manufactured alternatives to WPM because the cost of these alternative materials is easily offset by the reduction of inspection costs and speeding the movement of cargo through our ports. They stated this would also reduce the necessity for expensive government programs to control invasive species that come in as hitchhikers in solid wood built crates and containers.

A commenter who disagreed with those advocating that APHIS require manufactured alternatives stated that a preference for using these alternate materials is based on flawed and inaccurate arguments that assume that the IPPC Guidelines will result in an increased demand for wood products and thus translate into negative environmental effects. This commenter stated that overall life-cycle impacts show far greater negative environmental impacts from using nonwood substitute materials. Also, the commenter stated that an outright ban on the use of WPM, in favor of substitute materials, without credible and proven scientific justification would be inconsistent with the World Trade Organization agreements.

Response: Please also see the above response. This rule allows, but does not require, methyl bromide use, and also allows use of untreated alternative (manufactured) packing materials, and also offers heat treatment as an alternative to fumigation with methyl bromide. Heat treatment does not generate gases that could cause damage to the stratospheric ozone layer.

The commenters who suggested that the cost of using alternative materials would be offset by the reduction of inspection costs and speeding the movement of cargo did not offer data to support that theory. While inspectors do spend somewhat less time clearing manufactured packing materials compared to clearing WPM, APHIS doubts that the savings would come close to offsetting the costs, because many articles besides WPM must be inspected at ports (such as the regulated articles often packed in WPM). While faster cargo clearance would benefit importers, the value of this benefit is uncertain, and in any event, importers are free to use alternative packing materials if they perceive a benefit in doing so. We also note that importers can also achieve faster cargo clearance and fewer inspections by establishing a history of compliance for their shipments; if their WPM is consistently properly treated and marked, and free from pests of concern, their shipments may be cleared faster.

Regarding the commenter who stated that the rule will not result in an increase in the use of WPM versus alternative materials, we agree. As discussed above, the rule may actually act to increase the number of exporters choosing alternative materials, since the additional cost of treating WPM will bring its total cost closer to the cost of some alternative materials. We also agree with the commenter that overall life-cycle impacts show negative environmental impacts from using nonwood substitute materials, but we do not agree that these would be "far greater" than the environmental impacts from using treated WPM. We have not seen any quantitative data that supports the position that the environmental costs of using nonwood substitutes would likely be greater than those for using WPM. We agree that mandating use of alternative materials would not represent the least restrictive necessary action, and would have adverse effects throughout the international trade economy.

Comment: An adequate assessment of any adverse environmental impacts associated with use of WPM must include a comparison of substitute materials that would take the place of wood-based packaging material. On those terms, the results are crystal clear. By any water quality, air pollution, or energy use environmental measure, wood products are clearly environmental performance leaders. It takes between 33 and 47 percent less energy to produce a wood product than to produce a similar product made from competing materials such as concrete and steel, and producing WPM results in less carbon dioxide emissions.

Response: Alternative packaging materials do have higher production costs than WPM, including greater energy costs. When harvested under careful management, trees can be a replenishable resource, unlike petroleum or metal ores. When WPM has exhausted its useful life, it can be recycled into products like particle board at a lower fiscal and environmental cost than plastic or metal can be recycled. However, the need to treat WPM must be taken into account when assessing the environmental impacts associated with it. While we believe authorizing use of treated WPM is a reasonable balance among pest risk, economic, and environmental concerns, we do not conclude that WPM is the "clear environmental performance leader." For further discussion of this issue, see the section of this document titled "National Environmental Policy Act," and section IV(A)(5) of the FEIS, which states "Wood has certain advantages from the environmental perspective. Renewability gives wood a large advantage over other materials. The manufacture of wood products requires substantially less energy than the production of substitute products. Wood product manufacture results in less greenhouse gas and other air pollutant emissions."

Comment: If WPM were banned in favor of alternative materials, it would not only destroy an industry, it would significantly increase costs to shippers, which would be passed on to consumers. Metal pallets are too expensive and heavy. Plastic pallets, unlike WPM, are not biodegradable, and are a major and toxic fire hazard. More goods are coming into this country than are going out. Most of them are on pallets. Wooden pallets can be disassembled and recycled, if not as pallets then as landscape mulch or wood stove pellets. Pallets made of plastic or metal will begin to pile up in landfills across America. Landfills could expect to realize exponential growth of nonbiodegradable pallets.

Response: We partly agree with this comment, as discussed above. However, a minority of shippers already choose to use alternative pallet materials, which shows that the choice must be economically viable in some

circumstances. We also note that because this rule applies only to articles imported into the United States, neither the rule nor the alternative of requiring alternative materials would destroy the market for WPM produced in the United States. Untreated WPM could still be used in domestic commerce, or in exports to any country that has not implemented the IPPC Guidelines or a similar treatment requirements.

In addition, selection of the available alternate packaging materials does include the continuing use of processed wood. This includes plywood, corrugated packaging materials, etc. These are products of the wood industry that pose comparable disposal and recycling capability to that of WPM. Some are cost-competitive with WPM, and required treatment costs under adoption of the IPPC Guidelines could make the selection of some of these alternate packing materials more favorable to the shipping industry.

Treatment Effectiveness

Comment: The proposed treatment measures, especially methyl bromide fumigation, have not been proven effective against pathogens. While APHIS says that few pathogens are detected on wood packaging, the agency concedes in its draft environmental impact statement (DEIS) and other publications that inspectors have great difficulty detecting pathogens; therefore, it has not been proved that pathogens represent as minor a threat as APHIS now implies. Furthermore, the DEIS associated with this rulemaking states that some deep wood-borers also might not be killed by the proposed treatments. Our concerns about efficacy are heightened by the fact that the IPPC standard does not require debarking the wood before further treatment. Debarking is key to improving the already questionable ability of methyl bromide to penetrate the wood to kill deep wood pests.

Response: The basis for international acceptance of the efficacy provided by the IPPC Guidelines is the review by IPPC member countries of certain reference documents that are now posted in a link from the APHIS Web page at *http://www.aphis.usda.gov/ppq/swp/approved_guideline.html.* Historically, the pest risks of WPM were manageable by inspection when international trade was more limited. All commenters have acknowledged the need for increased protection of wood resources, but there are differences of opinion about the level of protection needed to mitigate pest risks.

Although some may contend that the regulations are overly protective, others are not satisfied with this level of protection. The approach taken by APHIS is to regulate according to demonstrated risk level. The adoption of the IPPC Guidelines would dramatically decrease the pest risk of concern to APHIS posed by importation of WPM. Selection of this regulatory approach does not prevent APHIS from further deliberation on more intensive regulation if the protection measures are determined to be inadequate for specific risks from pests of concern. Enforcement of the IPPC Guidelines could provide a baseline for determining any need for further protective measures.

Comment: The two treatment options allowed under the rule—heat treatment and methyl bromide fumigation—have an unacceptably high rate of failure to stop invasive pests traveling in solid wood packaging. In the DEIS, APHIS itself has questioned the efficacy of heat and methyl bromide treatments.

Response: There are differences of opinion among commenters regarding the effectiveness of treatments in the IPPC Guidelines to eliminate invasive pests in WPM. The DEIS does not question the efficacy of these treatment methods per se, but it does indicate the advantages and limitations of each treatment method to eliminate pest risks. The DEIS does not take a position as to whether the treatments in the IPPC Guidelines will be the ultimate solution or part of the ultimate solution, but the development of additional data about efficacy and pest exclusion for all potential pests and pathogens may lead to further consideration of these phytosanitary regulations by APHIS.

Comment: Instead of the proposed treatments, APHIS should require WPM to be subject to the documented effective treatment for wood products, heat treatment with or without moisture reduction as specified under the APHIS universal treatment option: 71 °C at the center of the material for 75 minutes. This treatment would substantially minimize the threat of introduction of injurious organisms. Until other efficacious wood treatments are sufficiently documented, this heat treatment provides the broadest and safest approach to the wood importation issue.

Response: The proposed treatment requirements for WPM would provide much more protection against pest risk than the current requirement of debarking and apparent freedom from pests. The 71.1 °C treatment was not established with SWPM in mind, but rather as a universal treatment option that would be certain to eliminate pests in all wood materials regardless of their risk level. As the 1995 final rule (60 FR 27666, May 25, 1995) that first established the regulations said, "These universal options employ heat treatment and other conditions for importing logs and lumber not otherwise enterable. These universal options are relatively stringent, because they must eliminate the spectrum of potential plant pests and address risks that have not been characterized. The universal options are designed to give importers a way to import articles that would otherwise be prohibited until detailed plant pest risk assessments are completed. Whenever feasible, importers may choose to employ universal options while plant pest risk assessments and rulemaking are underway to establish less stringent requirements for the articles they wish to import."

Also, as stated in the August 2000, "Pest Risk Assessment for Importation of Solid Wood Packing Materials into the United States," APHIS is preparing a pest risk reduction analysis that will evaluate the effectiveness of various available treatments and potential mitigation alternatives for WPM. If information gathered during development of the pest risk reduction analysis suggests that the stringency of existing WPM treatment requirements should be either strengthened or lessened, APHIS will undertake rulemaking to do so.

Comment: Methyl bromide is ineffective against many deep-wood pathogens and pests because it does not penetrate to the center of thick boards or timbers. Its use cannot be verified at a later date, and it does not prevent reinfestation.

Response: While methyl bromide is ineffective against some deep wood pathogens, and a few deep wood pests, these pathogens and pests usually are not significant pests associated with the WPM pathway. Many treatments cannot be verified at a later date by physical analysis or examination at ports. That is one reason this rule requires marking of treated materials. The marking system, coupled with registration and monitoring/auditing of treatment facilities by national governments, is the means for ensuring treatment has occurred. Finally, while reinfestation of fumigated WPM is possible, the risk is low (beyond the level of hitchhiking pests that might attach to any kind of packaging).

Canada and Mexico

Comment: The current exemptions from the regulations for wood articles from Canada and from Mexican border states should be extended to include WPM that is imported into the United

States from the balance of Mexico. This action would be consistent with the North American Free Trade Agreement (NAFTA) and the North America Plant Protection Organization announcement dated April 25, 2003. It would avoid administrative complexities and the cost of a partial exemption from border States only, as well as avoid the production of additional export pallets from Mexico to the United States.

Response: APHIS took final action on this issue in a final rule titled "Importation of Unmanufactured Wood Articles From Mexico" that was published in the **Federal Register** on August 26, 2004 (69 FR 52409–52419, Docket No. 98–054–3). In that final rule, APHIS amended the regulations to remove the exemption for most unmanufactured wood, including WPM, imported into the United States from Mexican States adjacent to the United States/Mexico border. The only exemption that continues for Mexican border States covers firewood, mesquite wood for cooking, and small, noncommercial packages of unmanufactured wood for personal cooking or personal medicinal purposes. The effect of that change was that all WPM from Mexico will be subject to the same requirements in § 319.40–3(b) that apply to WPM from any place except Canada.

Comment: The United States and Canada must work together to curtail the disproportionate numbers of introductions of forest pests that are occurring in the Great Lakes region. They are far out of proportion to the volume of foreign shipping in that region or to the volume of interceptions by Federal inspectors. It is equally important that APHIS quickly complete the separate rulemaking to close the loophole that allows untreated WPM to enter the country from northern Mexican states.

Response: Please see the response above. APHIS is actively working with the Canadian Food Inspection Agency to curtail pest introductions. Most of these introductions are pests not of Canadian origin that arrive via transshipped materials. We expect their level to decrease as Canada implements its own regulations requiring WPM imported into Canada to be treated in accordance with the IPPC Guidelines. Also, APHIS is currently developing a pest risk assessment for wood from Canada, and if we identify any significant risks that have not been addressed by current regulations, we will take appropriate rulemaking action.

Methyl Bromide—Montreal Protocol

Comment: The proposed use of methyl bromide would violate the spirit and intent of the Montreal Protocol. It would exceed the intent of the quarantine exemption. It is inconsistent with Protocol Decisions that were adopted by the Montreal Protocol parties with the consent of the United States. Decision VI/11 of the Meeting of the Parties to the Montreal Protocol, for instance, states that developed country parties "are urged to refrain from use of methyl bromide and to use non-ozone depleting technologies wherever possible." The U.S. Environmental Protection Agency (EPA) wrote in its comment on the proposed rule regarding wood imports from Mexico (June 11, 1999, 64 FR 31512–31518) that because of the need to honor the Montreal Protocol and protect the ozone layer, "allowing the use of methyl bromide in quarantine treatment of Mexican wood articles where other effective treatments exist would be inconsistent" with Protocol Decisions.

Response: APHIS is committed to finding environmentally acceptable alternative treatments to methyl bromide fumigation. At the current time, methyl bromide is an efficacious and economically feasible quarantine treatment to control pests in WPM, and we have determined that allowing it as an alternative treatment for WPM in the context of this rule will provide the necessary level of pest protection while minimizing impact on the environment given the absence, in many cases, of technically and economically feasible alternatives. This determination is supported by the FEIS, as discussed below in the section titled "National Environmental Policy Act."

As discussed above, APHIS actively cooperates with other agencies and to identify and validate technically and economically feasible alternatives to methyl bromide. APHIS will continue to work cooperatively with the IPPC as APHIS explores alternative treatments to methyl bromide and incorporates validated, economically feasible alternatives into our quarantine regulations.

Comment: The U.S. Department of Agriculture (USDA) estimate that methyl bromide emissions will increase by 5,145 metric tons, increasing total world usage by more than 10 percent, is a vast underestimate because it was based on the assumption that WPM would be fumigated before use. From experience in China, fumigation occurs at port facilities, after goods are packed in raw wood materials. USDA even states in the proposal that most wood packaging fumigation consist of about 35 percent WPM and 65 percent cargo. The USDA FEIS on wood from Mexico predicts a massive increase in methyl bromide use of more than 102,000 tons per year. That would increase current world use for quarantine purposes by 10 times. It would triple total world use of methyl bromide for all purposes. Under these circumstances, USDA has not complied with its obligations to present a rational basis for its proposed action under the National Environmental Policy Act (NEPA), the Plant Protection Act, or the Administrative Procedure Act.

Response: The draft and final EIS projections are based upon ongoing review of actual usage data and observations of activities at Chinese ports by APHIS personnel. The initial usage analyses were based upon the limited available time for exporters and shippers to prepare to treat WPM as required by APHIS in an interim rule published on September 18, 1998 (63 FR 50099–50111, Docket No. 98–087–1). These analyses considered the fumigation of WPM with already loaded cargo rather than fumigation of WPM before loading. Although there was primarily fumigation of WPM with loaded cargo by the exporters and shippers in China initially, this approach to WPM treatments did not continue. Many shippers and exporters from China began fumigating WPM prior to loading, for at least three reasons. The cost savings to the shippers and exporters from less use of methyl bromide in fumigations of WPM prior to loading were substantial. Also, many agricultural commodities lack a tolerance for the bromine residues imparted by fumigation with methyl bromide. Finally, fumigation after loading could make food commodities illegal for human consumption in the United States and could damage certain other commodities (*e.g.*, leather goods and some electronic parts).

Unlike the limited time exporters and shippers in China had to prepare for the September 18, 1998, interim rule, shippers and exporters throughout the world are aware of the IPPC Guidelines and have had time to prepare for these regulations. In addition, the IPPC Guidelines require marking the wood used in WPM, and it is easier and less expensive to treat and mark prior to loading than to unload after treatment to place markings on the treated WPM and then reload. Based upon this, it is reasonable to expect most exporters and shippers to fumigate WPM before loading. The fact that the projection in the FEIS assumes fumigation as the method of treatment for all WPM

indicates that it is actually a high estimate because we know that many developed nations will actually use heat treatment rather than fumigation for compliance with IPPC Guidelines.

We expect fumigation of WPM to decline over time as shippers build a stockpile of treated pallets, which normally can be used for up to 3 years. We also expect heat treatment to substitute for fumigation in some additional locations as more facilities are built.

Comment: The final rule should explain more about the EPA's plans to phase out methyl bromide, particularly its intent to publish a plan and timeline in the **Federal Register** about December 2003.

Response: Since the EPA is continuing to develop its plans and timeline for this issue, APHIS cannot provide conclusive information about them. We suggest that readers interested in the EPA's actions concerning methyl bromide follow EPA publications in the **Federal Register**.

Methyl Bromide—Other Issues

Comment: Methyl bromide fumigation and heat treatment facilities are generally unavailable in many parts of Africa and Indonesia. Rubber exports from these areas have been shipped without risk using WPM treated with Borax as per the Rubber Research Institute of Malaysia No. 122 method, or with a fungicide and insecticide called Xylolit B4.

Response: Neither of these are approved treatments for WPM under APHIS regulations, and neither has been documented to be as effective as methyl bromide and heat treatment against target pests. APHIS is willing to review any scientific data regarding other treatments, and to consider adding treatments that are proven effective. However, when this rule goes into effect we will only accept WPM treated according to the new regulations, which do not authorize borax or insecticide/fungicide treatments. We recognize that some importers may have to make substantial adjustments to their business practices and packing material suppliers to comply with the regulations, but we believe the pest risk associated with WPM justifies the new requirements.

Exempt Certain Articles From Regulation

Comment: The treatment requirements of the proposal should not apply to the WPM containers of imported fresh fruits and vegetables. Specifically, APHIS should exempt typical small fruit and vegetable crates in common use. These crates are made of mixed plywood and natural wood, and are about 12″ × 7″ × 4″ high, with 1.1″ × 1.1″ × 4″ high natural wood corner supports. WPM used in the international trade of regulated goods, such as fresh fruits and vegetables that are documented by an official phytosanitary certificate of the country of origin, presents a phytosanitary risk significantly lower than WPM in general. Phytosanitary certificates apply to both the commodity being exported and the WPM used in their transportation.

Response: APHIS interceptions records from 1996–2001 show an increasing number of pests associated with WPM, including in containers for fresh fruits and vegetables. Based on interceptions at ports, WPM used for the shipment of fruits and vegetables can pose a significant risk. Importers of these products may be able to avoid having their containers considered to be regulated articles by redesigning them to eliminate the thicker pieces of raw wood often used as corner supports. Containers that use pieces of raw wood less than 6 mm (0.24 in) thick and containers made wholly of manufactured wood would be exempt from regulation. For the specific crates to be exempted, the corner supports would have to be replaced with exempt materials (plywood, particle board, veneer, etc.) or with bundled pieces of raw wood each of which is no more than 6 mm (0.24 in) thick.

Comment: We request that APHIS address compliance requirements for WPM originating in the United States, shipped to a foreign location and then exported back to this country. It seems unlikely that WPM exported from the United States will be marked according to the IPPC Guidelines until all other countries have adopted those Guidelines. Consequently WPM originating in the United States that is exported and then returned would not satisfy the IPPC Guidelines unless an interim marking mechanism is established and used. Will APHIS allow U.S.-origin WPM that is exported and reimported into the United States to be marked according to requirements established by relevant foreign jurisdictions on an interim basis until all other countries adopt the IPPC Guidelines?

Response: We are not adopting the suggested approach because using additional markings to indicate that WPM originated in the United States would require a major regulatory program to ensure the validity of such markings. It would be expensive, inconvenient, and a drain on APHIS resources that can be employed more usefully elsewhere. It would also be confusing to foreign governments that are just getting used to the markings in the IPPC Guidelines. There are already many sources of treated WPM in the United States, and APHIS, as the national plant protection organization of the United States, is currently developing procedures to meet its responsibilities under the IPPC Guidelines to inspect, monitor, accredit, and audit commercial companies that treat WPM and apply the official mark to it that indicates treatment. There are also many foreign sources of WPM treated in accordance with the regulations, and many U.S. shippers doing business with Canada already obtain their WPM from foreign sources.

Dunnage and Small Wood Pieces

Comment: Does the proposed marking requirement mean that every piece of the 40 to 80 tons of dunnage that may be carried on board a steel transport ship could be subject to inspection prior to discharge? This is a serious problem because dunnage is used under the steel since it is intended to prevent movement of the cargo during the voyage. Long steel products are carried stowed in a fore-and-aft direction in ships' holds. Dunnage is used athwartship. In such a correctly stowed hold there should be little or no dunnage showing on completion of loading, so that marking may not make a difference as far as inspection prior to discharge is concerned. Also, sometimes ships meet with such bad weather during their sea voyage that part of the dunnage is crushed or broken. As a result, there will then be pieces of dunnage unmarked. What measures are then intended?

Response: We recognize the difficulty in ensuring that required treatment marks are present on some dunnage that is custom cut to brace or fill gaps in a particular load. However, dunnage is frequently made from the type of low quality wood that poses the greatest pest risk, and it is therefore necessary that dunnage be treated and marked the same way as any other regulated WPM. The fact that the nature of some cargoes makes it impossible to inspect the associated dunnage aboard ship is not particularly relevant because dunnage inspection is normally done following cargo discharge.

Alternatives to Marking WPM

Comment: To speed port clearance and aid enforcement, we support using very simple self-declarations of compliance to accompany any and all international shipments, even those totally free of solid wood packaging.

The self-declaration would affirm that all packaging in the shipment complies with the provisions of the IPPC Guidelines. This is vital information and therefore should be repeated in key shipping documents such as bills of lading, invoices, and so on.

Response: We welcome the use of electronic records for many port operations purposes, and we are working with the U.S. Department of Homeland Security (DHS) on projects in that area. However, APHIS has decided that the system of authorized WPM markings applied by facilities operating under the supervision of national governments is more reliable than a system where individual invoices and shipping documents affirm compliance. Affirmations in shipping documents about whether or not cargoes contain WPM, and whether or not the WPM has been treated, are frequently unreliable. Our experience clearing shipments from China showed frequent incidents where shipping documents contained an affirmation that no WPM was in the cargo, despite its presence. Under this final rule, inspectors can tell directly from observation of the WPM whether or not it is in compliance (barring fraudulent misuse of the mark, which will be addressed by auditing and monitoring). This process does not need to be significantly slower than using shipping documents. Importers that establish a record of compliance over a number of shipments generally will be subject to less inspection. Clearance time will also decrease as importers and exporting countries gain experience with the new requirements and acquire a history of moving shipments without inspectors finding pests of concern associated with them.

Comment: Clearing WPM at ports based on physical inspection to see if it is marked will cause significant delays in the clearance of imports without commensurate benefits. Containers and air cargo will have to be unloaded individually and each pallet, crate, or other regulated item inspected. This is highly burdensome and costly for both importers and the government, and will cause major disruptions to importers' supply chains, many of which are part of just-in-time inventory management systems. For the government these inspections will divert inspectors of the U.S. Bureau of Customs and Border Protection (CBP), DHS, from their primary cargo security mission.

We urge APHIS to offer an alternative that would be consistent with the best practices being implemented throughout the regulatory realm, which allow for electronic filing of compliance information. In an electronic system, importers would be allowed to transmit a compliance code to the CBP, by which code they would certify that the WPM is compliant or that there is no WPM contained in the shipment. This is how compliance certifications are presented to other government agencies such as the Federal Communications Commission and the Food and Drug Administration. A paper alternative, such as a stamped statement on a bill of lading or invoice, should be available for situations in which electronic certification is not practical.

Additionally, we recommend that APHIS consider providing for a blanket certification for importers who can assure to the satisfaction of APHIS that their WPM is routinely compliant. In the electronic environment, this would consist of importer information established as part of its CBP account profile. CBP is developing these profiles as part of its Automated Commercial Environment architecture. We urge APHIS to work closely with CBP to implement the necessary interfaces between CBP's system and APHIS. In the interim, we request that APHIS accept blanket paper certificates of compliance by which importers certify that for a designated period of time all imports of WPM into the United States are compliant.

Response: See the response to the previous comment.

Inspection Procedures

Comment: Because not all WPM poses equal risks, APHIS should use risk management to avoid unnecessary shipment delays caused by ineffective random inspections. Take advantage of data from existing importers quality control procedures and compliance programs. Highly compliant importers, as verified by valid statistical sampling of imports, should be subject to a lower rate of physical inspections than unknown or noncompliant importers.

Response: APHIS intends to use risk management techniques and data from a variety of sources to target its inspection activities and its monitoring and auditing activities for facilities conducting treatments.

Delayed Effective Date and Noncompliant Shipments

Comment: Instead of immediately starting to order the reexport of unmarked WPM, we request a 2-year transitional period to phase out old WPM with previously acceptable marking (for example, "HT" without the IPPC symbol) provided the treatment requirements prescribed by the proposed rule are satisfied.

Response: APHIS received a number of comments stating that exporting countries and shippers would need time to adapt to the new requirements of the rule and to change some of their business practices and WPM sources. We agree, and in response we have set the effective date for this final rule at a date 1 year after its publication date. We believe affected parties will be able to prepare for the new requirements during this period. APHIS will also conduct a very active information campaign during this period to ensure that affected parties are aware of the new regulatory requirements. Consistent with parties' commitments under the Montreal Protocol, this campaign will also stress to affected parties that use of alternate packing materials or heat treatment of WPM are environmentally preferable alternatives for meeting the requirements, as documented by the FEIS. As part of this campaign, APHIS inspectors at ports will focus on imported WPM shipments that do not meet the new requirements, and will give the importers official notice explaining what they must do for future shipments (*i.e.*, those arriving after the effective date of this final rule) to comply with the new requirements.

Comment: In case of noncompliance, the proposal would require reexport after separating the cargo, if possible. Why not allow the other measures explained in item 6.1 of the IPPC Guidelines, such as incineration, processing or treatment, etc.?

Response: Reexportation is necessary because we need to achieve compliance (treatment and marking of WPM before arrival) in order to fully protect against the introduction of plant pests. In recent years, several destructive plant pests, including the Asian longhorned beetle and the emerald ash borer, have been introduced into the United States. We believe that these pests have entered the United States in WPM at ports of entry. Therefore, we believe that proper treatment of WPM, prior to importation into the United States, is essential to safeguard our agricultural resources from further pest introductions. We believe requiring the reexportation of noncompliant WPM is the only option that will ensure that WPM is properly treated prior to its arrival in the United States. Also, allowing post-entry treatment is not feasible because space and services at ports are limited and ports cannot be burdened with vast quantities of noncompliant materials awaiting treatment or incineration. Further, allowing post-entry treatment would place an additional burden on already scarce port resources since it would be necessary to track shipments

to ensure proper treatment. Finally, the reexportation requirement is consistent with the approach adopted by other IPPC member countries, such as Canada.

Comment: The requirement to reexport noncompliant imports is too stringent. Some WPM might not be stamped due to simple error. In cases where marking is absent but no pests have been intercepted, the cargo should be accepted. Even if pests are found WPM could be fumigated or treated appropriately at the expense of the importer in the routine manner for other noncompliant goods. Equivalent measures should be explored. The national plant protection organization (NPPO) of the exporting country could then be informed about the non-compliance with the details of the exporter so that the NPPO could monitor that exporter.

Response: Please see the above responses about the 1-year delay in the effective date of this rule, which will give affected parties time to comply with the new requirements. We intend to inform the NPPO's of exporting countries about noncompliance in shipments from their countries, but this is in addition to, not a substitute for, enforcement action by APHIS.

Comment: When imported WPM is not in compliance, APHIS should require both the WPM and cargo to be treated at the port of entry. Separating the cargo from the WPM without treatment could result in the introduction of wood borers into the environment. Similarly, any properly marked WPM that proves infested should be required to be treated at the port of arrival. Fumigators at the ports of entries have years of experience treating cargo upon arrival and have the expertise to ensure that any destructive pests are destroyed and that the free flow of trade is not impeded. Requiring the reexport of WPM and associated cargo will impede international trade and hurt the U.S. economy.

Response: As discussed above, the reexport option will be necessary to achieve compliance (treatment and marking of WPM before arrival), and also because space and services at ports are limited. In some cases, APHIS inspectors at a port of entry may discover signs of pests in a shipment that is apparently in compliance and order treatment in accordance with § 319.40–9. APHIS is committed to protecting U.S. agricultural resources and will ensure that any treatment after arrival is done under safeguards adequate to prevent the spread of pests. Sometimes this will involve treating cargo along with WPM, and sometimes it will not, based on the type of cargo and the nature of any pests that are identified.

Economic Impacts on WPM Producers

Comment: Forty percent of all hardwood lumber manufactured in the United States, and a goodly portion of the softwood as well, go into the manufacture of WPM like dunnage, crating, pallets, packing blocks, drums, cases, and skids. It is absolutely essential for the hardwood industry and very important to the softwood industry to preserve this huge market for their lowest quality lumber. Also, unloading containers in transit to verify whether the packing material has really been treated would greatly endanger certain products being transported (*e.g.*, fragile wood veneers), in addition to adding more time to the transportation.

Response: The problem is that the use of low grade, untreated wood in international WPM is exactly the practice that must be ended to protect U.S. resources against foreign plant pests. We do not see any alternative that would allow continued use of untreated WPM and also protect against these risks. With regard to unloading cargoes for inspection purposes, CBP inspectors at ports are experienced and well trained and deal professionally with any shipments. APHIS is developing new operational procedures to minimize delays caused by WPM inspections at ports. We also expect that the need for substantial unloading and inspection will decline over time as shippers and exporting countries become familiar with the new requirements and develop a history in which no pests of concern are found associated with their shipments.

Comment: Nearly 7,000 U.S. facilities produce pallets nationwide and are a vital utilizer for low grade wood which would otherwise have to be burned at high temperature for lack of other use. This, in turn, would considerably increase the cost of marketing high quality wood products like veneer, lumber, flooring, plywood, and particle board as well as other engineered wood products.

Response: We recognize that this rule will have some adverse economic effects, as discussed below in the section "Executive Order 12866 and Regulatory Flexibility Act." Such effects are sometimes unavoidable when APHIS takes steps to protect agricultural resources against plant pest risk. There will still be a market for domestically produced pallets because untreated WPM could still be used in domestic commerce or in exports to any country that has not implemented the IPPC Guidelines or similar treatment requirements.

Economic Impacts on U.S. Fumigators at Ports

Comment: The rule would reduce fumigation at ports of arrival, financially hurting quarantine fumigators that often are small family-owned businesses. These economic losses would be on top of significant revenue losses that fumigators incurred when APHIS implemented its interim rule on WPM from China.

Response: APHIS' main goal is protecting against any possible infestation that might be associated with imported WPM. There is a general trend throughout the world to reduce methyl bromide usage. While this final rule may result in reduced fumigation of wood products at U.S. ports of arrival, the 1-year delay in the effective date should give fumigation businesses time to adjust business plans. Also, as discussed above, APHIS may discover signs of pests in a shipment that is properly marked and may order treatment of either the WPM, the cargo, or both, as appropriate.

Implementation Schedule

Comment: The effective date of the final rule should be at least 1 year after publication, to allow developing countries to implement the necessary means and conditions, including national systems of treatment, inspection, registration or accreditation, and auditing of WPM to be shipped to the United States, thus avoiding an obstacle to international trade.

Response: We agree, as discussed above, and have delayed the effective date for 1 year. In general, APHIS has communicated very well with its trading partners, which should allow them to implement the needed systems within 1 year. After the effective date, we will enforce compliance with the new requirements.

Comment: We seriously doubt that any country outside of North America will be prepared to fully implement the standard by January 2004. We encourage the USDA to adopt the standard but also apply a generous grace period to allow importing countries to get up to speed on the marking systems and underlying audit programs. Otherwise, we will end up seeing a lot of "IPPC symbols" on pallets which may not have been treated to the same degree of quality and control as we would expect in the United States, thereby casting doubt on the efficacy of the whole program.

Response: Please see the responses above about the 1-year delay in the effective date. CBP will audit all

material shipped, as well as records for facilities treating WPM and applying the mark. Shipments from countries with high levels of noncompliance will face higher levels of inspection.

Miscellaneous Comments

Comment: The IPPC Guidelines do not specifically require that WPM be free of bark. Does APHIS intend to specify a bark-free requirement for WPM in the final rule?

Response: No, APHIS will not require the wood to be bark free, as long as it has been properly treated. Currently available data shows that treatment alone will adequately kill the pests of concern.

Comment: There is no provision in the proposed rule describing what mark should be used by non-IPPC member countries. There will be trademark registration on the IPPC mark so non-IPPC member countries may not be entitled to use this marking.

Response: APHIS is not responsible for any country's decision on whether or not to join the IPPC, or for how any country addresses trademark issues. We do note that the IPPC is in the process of registering the mark in many countries at this time for use on materials treated in accordance with the IPPC Guidelines. We also note that, even if a country cannot establish treatment facilities authorized to apply the mark in their own country, they can readily obtain treated and marked WPM from other countries, or they can use alternative materials to WPM.

Miscellaneous Editorial Changes

In addition to the changes discussed above, we are making some minor changes for clarity and consistency. We are removing the definitions of *exporter statement*, *importer statement*, and *solid wood packing material* because these terms are no longer used in the regulations. We are slightly editing the table in § 319.40–3(b)(1)(ii) that provides the methyl bromide treatment schedule so that it provides concentrations in lbs./1,000 c.f., as well as in g/m^3. We are also adding a graphic and description of the approved IPPC mark to § 319.40–3(b)(2).

Therefore, for the reasons given in the proposed rule and in this document, we are adopting the proposed rule as a final rule, with the changes discussed.

Executive Order 12866 and Regulatory Flexibility Act

This rule has been reviewed under Executive Order 12866. The rule has been determined to be significant for the purposes of Executive Order 12866 and, therefore, has been reviewed by the Office of Management and Budget.

Below is a summary of the economic analysis for the changes in WPM import requirements in this document. The economic analysis provides a cost-benefit analysis as required by Executive Order 12866 and an analysis of the potential economic effects on small entities as required by the Regulatory Flexibility Act. A copy of the full economic analysis is available for review at the location listed in the **ADDRESSES** section at the beginning of this document, or on the Internet at *http://www.aphis.usda.gov/ppq/swp/*.

In accordance with 5 U.S.C. 604, we have performed a final regulatory flexibility analysis, which is set out below, regarding the effects of this rule on small entities. The initial regulatory flexibility analysis in our proposed rule stated that we did not have all the data necessary for a comprehensive analysis of the potential effects of this rule on small entities. Therefore, we invited comments concerning potential economic effects, particularly the number and kind of small entities that might incur benefits or costs. We did not receive any comments providing the specific data we requested, but we did receive several comments stating that some small business will be adversely affected by the rule, including importers with substantial inventories of WPM on hand in foreign countries, which they would no longer be able to use for shipments to the United States, and fumigators at U.S. ports that currently treat large volumes of WPM upon arrival and expect to lose much of this business after the rule is implemented. Several commenters also suggested that domestic WPM manufacturers faced indirect effects that could result when other countries adopt the IPPC Guidelines, reducing the demand for untreated WPM.

Under the Plant Protection Act (7 U.S.C. 7701–7772), the Secretary of Agriculture is authorized to regulate the importation of plants, plant products, and other articles to prevent the introduction of injurious plant pests.

This analysis evaluates a final rule adopting the IPPC standards on wood packaging material, the International Standard for Phytosanitary Measures No. 15. This standard contains globally accepted measures that may be applied to WPM to reduce the entry of pests via this pathway. The IPPC Guidelines require WPM to be heat treated at 56 °C for 30 minutes, or fumigated with methyl bromide.

Alternatives considered and rejected included the alternative of taking no action. This alternative was rejected because recent interceptions of pests at ports of entry show a steady increase in serious pests associated with WPM from everywhere except China, whose WPM must already be treated due to past pest interceptions. If left unchecked, pests introduced by imported WPM have the potential to cause significant economic damage to the agricultural and forest resources of the United States.

We also rejected the alternative of extending the China interim rule to all WPM worldwide, because that would not ensure long-term exclusion of some wood pests of quarantine concern, such as certain deep wood-borers, fungi, rots, and wilts. The adoption of the IPPC treatment standards for all importing countries will address pest threats posed not only by Cerambycidae, which was the primary target of the China interim rule, but nine other pest families as well. Additionally, adoption of the China interim rule requirements would result in the greatest additional use of methyl bromide of all the alternatives.

Another alternative not adopted was a comprehensive risk reduction program allowing differing, circumstance-dependent risk mitigation strategies that include various options for complying with United States import requirements. A comprehensive risk reduction program would consist of an array of mitigation methods (*e.g.*, inspection, various heat treatments, various fumigants and other chemical treatments, irradiation, etc.) that is more extensive than that contained in either the China Interim Rule or the IPPC Guidelines. Many of the treatment methods being considered as components of a comprehensive risk reduction program require more research and development to demonstrate that they could be used effectively and economically to treat the required range of WPM products. Some of the remaining issues include inadequate control, incomplete efficacy data, safety issues, and lack of adequate facilities or supplies. Therefore, while comprehensive risk reduction is still considered a possible future approach for WPM import requirements, it is not practical to adopt it at this time.

Another alternative, substitution of other packing materials, was rejected because it requires use of materials the cost of which exceed the likely costs of SWPM that is either heat treated or fumigated with methyl bromide.

We believe it is appropriate and necessary to adopt the IPPC Guidelines because they were developed as an international standard to control pests associated with WPM. The types of pests the IPPC Guidelines were developed to control have been

intercepted at U.S. ports for many years and pose significant risks to U.S. resources. The damage they cause could be similar in magnitude to the recent introduction of the Asian longhorned beetle (ALB) *Anaplophora glabripennis* (Coleoptera: Cerambycidae). Our regulations have already been changed to prevent further introductions of ALB from China, but adopting the IPPC guidelines could prevent the introduction of ALB or similar wood borers from other parts of the world, as well as prevent the introduction of other types of pests such as woodwasps and bark beetles. Imposing the IPPC Guidelines' treatment and other requirements to prevent these introductions will yield net benefits. The benefits (avoided losses) that can be gained by preventing introduction of these pest types are discussed below. The actual magnitude of the benefits cannot be definitively ascertained, but they are likely to be much larger than the associated costs.

As an indicator of the damage ALB or similar wood borers could cause if introduced again in the future, consider the costs of the ALB introduction from China. The ALB, first discovered in New York, NY, in 1996 and in Chicago, IL, in 1998, was most likely introduced on wood packing material from China. The present value of urban trees at risk in the two affected cities is estimated at $59 million over some 50 years. About $6 million of urban trees have been destroyed due to pest infestation and eradication efforts since the introduction of ALB. So far, APHIS and State and local governments have spent over $59 million in eradicating the pest in the two localities. If only New York City and Chicago were considered, it would appear that the current eradication program has spent an amount equal to the value of the resource being protected. However, the eradication and quarantine activities have slowed the spread within New York and Chicago. Without these activities, the faster spread in these cities would increase the net present value because the resources would be lost in a much shorter amount of time. The eradication and quarantine activities are also the reason the pest has been confined to the two cities where it was initially detected. The potential damages from ALB spread to other areas can be gleaned from the Nowak *et al.* study that estimated losses to seven other cities. The present value of damage to urban trees in Baltimore, MD, alone, not allowing for intervention, was estimated to be $399 million. Additionally, without governmental intervention, forest resources would also be at risk.

Wood borers such as ALB could cause the most damage of all types of pests associated with WPM, but we have also projected that other types of pests could cause substantial damage. These include the Sirex woodwasp (Family: Siricidae) and the Eurasian spruce bark beetle *Ips typographus* (Family: Scolytidae). Projections of physical damages that can be caused by these types of pests range up to $48–$607 million and $208 million, respectively. Perhaps the greatest devastation posed by these pests that cannot be fully captured monetarily is their potential to cause irreversible loss to native tree species and consequential alterations to the environment and ecosystem.

The recent introduction of the emerald ash borer (EAB), *Agrilus planipennis* (Coleoptera: Buprestidae), a pest of ash trees, in Michigan and parts of Canada in June 2002 is a reminder of this threat. It is not known how the pest arrived in North America but, as with other exotic beetles, infested WPM from Asia is suspected. The pest may have arrived some 6 years ago, before the interim rule on China was implemented in September 1998 (63 FR 50099–50111, Docket No. 98–087–1). Ironically, many of the large ash trees favored by the pest were originally planted to replace elm trees killed by Dutch elm disease caused by yet another exotic pathogen. A preliminary assessment of the potential impact of the EAB on urban and timberland ash trees in the six counties originally quarantined by Michigan comes to about $11 billion in replacement costs alone. The nursery stock industry in the affected counties reported a loss in sales so far of $2 million. These estimates serve to highlight the potential magnitude of damage that could be caused by one outbreak alone of a pest on the targeted list.

The adoption of the IPPC treatment standards for all importing countries will address pest threats posed not only by Cerambycidae, which was the primary target of the China interim rule, but nine other pest families as well. Approximately 95 percent of pests intercepted by APHIS inspectors in shipments worldwide are pests on the IPPC target pest list.

The treatment requirements in this rule are not expected to completely eliminate all pest interceptions related to WPM. As evident from data reported between 2000 and 2001, 2 years following the implementation of the China rule, 7 percent of pest interceptions was still associated with China imports. To the extent that pest interceptions will be reduced, the risk of an outbreak will also be lower than in the absence of the rule. However, because pests continue to be intercepted albeit at a lower rate, benefits need to be correspondingly adjusted to reflect the risk.

In discussing the costs that might result from adopting this rule, it is essential to recognize that to some degree these costs will accrue when other countries adopt the IPPC Guidelines, whether or not the United States also adopts them. As other countries impose IPPC treatment requirements on imports containing WPM the global WPM market will be greatly affected, likely causing a broader impact on the domestic wood packaging industry than the provisions of this rule.

Adopting this rule may also cause general societal costs due to human health issues (increases in skin cancer, cataracts, and other conditions) and reduction in crop yields that may result if increased use of methyl bromide as a result of this rule delays recovery of the ozone layer. It is impossible to confirm or estimate such costs at the present time.

The effects of this rule will fall largely on foreign manufacturers of pallets. The increased treatment cost may add to the cost of packaging and transporting of goods which, in turn, will affect importers of commodities transported on pallets and final consumers of those goods are potentially affected by this rule. The required treatments will add to the cost of packaging and transport of goods. Due to the very large number of pallets that are used to assist imported cargo, the overall cost may be substantial. The extent of the impact on U.S. consumers will depend on the ability of importers to pass on the additional costs to respective buyers. It is expected that most of the cost of treating pallets will be borne by foreign pallet manufacturers. Furthermore, given the small value of pallets as compared to the value of trade, increases in pallet prices are not expected to have a measurable effect on domestic consumers or on trade.

We also expect this rule to affect U.S. purchasers of imported pallets, crates and boxes. Between 1999 and 2001, an average of 38 million pallets was imported into the United States, over 80 percent of which came from Canada. Imported WPM was valued at $150 million during this time period. At approximately $3.95 per piece, imported pallets are less expensive than domestic pallets where the average price ranges between $8 and $12 per pallet. Canadian pallets are primarily used by industries close to the U.S. and

Canadian border. The wood pallet market is highly competitive, and the demand for imported pallets can be characterized as elastic. While pallets made of alternative materials such as plastic, corrugated fiberboard, or processed wood are imperfect substitutes for wood, one wood pallet can easily substitute for another wood pallet.

Assuming a perfectly elastic supply and perfectly inelastic demand for imported pallets, and assuming a treatment cost that adds about $2 on average to a pallet, U.S. purchasers of imported pallets could lose an estimated $76 million in higher costs. The true extent of the impact, however, will be lower than this amount because demand is likely to be elastic and foreign importers are expected to share a greater burden of the cost increase. We do not know treatment costs for foreign pallet producers, but given the availability of substitutable domestic wood pallets, we do not expect U.S. purchasers of imported pallets to be significantly affected.

Recent and forthcoming decisions by other countries to adopt the IPPC standard, while not an effect of this rule, represent an associated issue that will indirectly affect manufacturers who sell pallets, crates, and boxes to foreign buyers. There are an estimated 3,000 manufacturers of pallets and containers in the United States. The primary importers of these items are Canada and Mexico. As these two countries prepare to implement the IPPC standard, only treated wood packaging material will likely be in demand for export. The extent of the impact on pallet and container manufacturers will depend on the ability of individual firms to put in place the necessary infrastructure for conducting treatments as required by the international standard. The number of U.S. firms that export WPM and will therefore be affected is unknown. Regardless, the impact on the overall WPM industry is expected to be small as the quantity of total pallets exported, estimated at about 10 million units, comprises only 2.5 percent of the 400 to 500 million pallets in production in the United States each year.

Domestic manufacturers of wood pallets may be indirectly affected in one other way. Because of the increasing trend in recycling of pallets for cost-cutting purposes, manufacturers may be faced with new demands for treated WPM from domestic exporters who reuse pallets and wood containers to ship goods back from foreign countries.

Effects on Small Businesses

The provisions of this rule are not expected to directly affect U.S. manufacturers of wood packaging material. There may be some decrease in the demand for pallets if some exporters decide to use alternate packing materials rather than WPM due to treatment costs for WPM. However, this should be more than balanced by new purchases of treated pallets by exporter/importers, who must now use treated pallets when they reuse pallets used to ship goods overseas to subsequently ship goods back to the United States. This may create an increased demand by exporters for treated pallets. Also, some U.S. pallet makers also make alternative packing materials (plywood, particle board) and could maintain their business levels even if there is a small demand shift from one category to the other.

The pallet industry in the United States is characterized by many small firms and a few larger firms. No one firm is able to dominate the market. U.S. Census data show that there are approximately 3,000 firms in the wood pallet and container industry. Other estimates of the number of firms in the industry range up to 3,500 pallet manufacturers in the United States. Most firms sell their products within a 350 mile radius. The average number of employees in 1997 was 17. Thirty two percent of the firms had fewer than five employees. The average sales were $1.5 million.

The Small Business Administration (SBA) classifies wood container and pallet manufacturers as small businesses if they have 500 or fewer employees. According to the U.S. Census Bureau, 1997 Economic Census, all pallet manufacturers are considered small businesses.

Fumigation services are currently available at several dozen ports of entry on a permanent or ad hoc basis. In most cases these fumigation services are provided by large businesses that serve a number of ports. Two commenters on the proposed rule stated that several fumigators at ports were small businesses that could be adversely affected if the demand for fumigation upon arrival decreases, but these commenters did not provide any specific data on the number or location of these businesses or the scope of the potential impacts.

While decisions by other countries to adopt the IPPC standard are independent actions not directly resulting from adoption of this rule, those decisions do raise the associated issue that the international WPM market will adjust as Canada, Mexico, and other countries adopt the IPPC standard. Small businesses such as pallet manufacturers and fumigators at ports may be adversely affected by those countries' decisions if they are unable to adapt to the increased demand for treated pallets. The number of small businesses potentially affected by other countries' decisions to adopt the IPPC standard is unknown. However, the adoption of the treatment standards by IPPC member countries that will then apply to U.S. exports will likely create a broader impact on the domestic wood packaging industry (small and large businesses alike) than the provisions of this rule.

Conclusion

This rule will affect foreign manufacturers of pallets which may, in turn, affect importers and final consumers of goods transported on pallets. Because the cost of a pallet is a very small share of the bundle of goods transported on pallets, cost increases due to the treatment requirements are not expected to significantly affect domestic consumers and thus will not have a measurable impact on the flow of trade. This rule is not expected to reduce the amount of goods shipped internationally as is evident from observing trends in imports from China since implementation of the interim rule in 1999.

This rule will also affect U.S. consumers of imported pallets. Given the substitutability of wood pallets, the impact on consumers is expected to be small due to the availability of wood pallets. Foreign importers are likely to absorb a greater share of the cost increase.

The simultaneous adoption of the treatment standards by IPPC member countries that is directed at U.S. exports will likely create a broader impact on the domestic wood packaging industry than the provisions of this rule.

This rule contains information collection requirements, which have been approved by the Office of Management and Budget (see "Paperwork Reduction Act" below.)

Executive Order 12988

This rule has been reviewed under Executive Order 12988, Civil Justice Reform. Under this rule: (1) All State and local laws and regulations that are inconsistent with this rule will be preempted; (2) no retroactive effect will be given to this rule; and (3) administrative proceedings will not be required before parties may file suit in court challenging this rule.

National Environmental Policy Act

On September 19, 2003, the U.S. Environmental Protection Agency (EPA) published in the **Federal Register** (68 FR 54900–54901) a notice of availability of the final environmental impact statement titled "Importation of Solid Wood Packing Material." The FEIS considers the environmental impacts from importation of wood packaging material that could result from our adoption of the proposed rule as a final rule.[2] The FEIS was prepared in accordance with: (1) The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*), (2) regulations of the Council on Environmental Quality for implementing the procedural provisions of NEPA (40 CFR parts 1500–1508), (3) USDA regulations implementing NEPA (7 CFR part 1b), and (4) APHIS' NEPA Implementing Procedures (7 CFR part 372).

Pursuant to the implementing regulations for NEPA, in cases requiring an EIS, APHIS must prepare a record of decision at the time of its decision. This final rule constitutes the required record of decision for the FEIS.

The NEPA implementing regulations require that a record of decision state what decision is being made; identify alternatives considered in the environmental impact statement process; specify the environmentally preferable alternative; discuss preferences based on relevant factors—economic and technical considerations, as well as national policy considerations, where applicable; and state how all of the factors discussed entered into the decision. In addition, the record of decision must indicate whether the ultimate decision has been designed to avoid or minimize environmental harm and, if not, why not.

The Decision

APHIS has decided, in this final rule, to amend its regulations to provide that wood packaging material imported into the United States from other countries will be subject to the requirements stipulated in the IPPC Guidelines. This includes specific treatment requirements for either heat treatment or fumigation with methyl bromide of the wood packaging material.

Alternatives Considered in the Impact Statement Process

The FEIS focuses mainly on pest risk issues from the use of wood packaging material, potential impacts from treatments with methyl bromide, and potential impacts from use of substitute packaging made from materials other than unmanufactured solid wood. The FEIS considers a reasonable range of alternatives, including: (1) No action, essentially maintaining the exemption from treatment requirements for importation of wood packaging material from foreign countries except as regulated under the September 18, 1998, interim rule that required treatment of WPM from China (China interim rule, 63 FR 50099–50111, Docket No. 98–087–1), (2) extension to all countries of the treatments in the China interim rule, (3) adoption of the IPPC Guidelines, (4) establishment of a comprehensive risk reduction program, and (5) use of substitute (non-solid wood) packaging material only.

Environmentally Preferable Alternative

The environmentally preferable alternative would be to prohibit importation of wood packaging material, which would virtually eliminate all associated pest risks, as well as the need for quarantine treatments. This regulatory approach (alternative 5 above) would require all commodities that are to be imported to the United States to be transported with only substitute packaging material, which at the current time would be technically and economically infeasible for many exporters, especially in developing countries.

Preferences Among Alternatives

There is a preference for the approach taken in this final rule, which we adopt herein (alternative (3), above). The preference for this alternative is based principally on the determination that it meets the Agency's obligations under the Plant Protection Act (PPA), and other legislation such as NEPA and the Clean Air Act.

The no action alterative (alternative 1 above) was rejected because recent interceptions of pests at ports of entry show a steady increase in serious pests associated with WPM from everywhere except China, whose WPM must already be treated due to past pest interceptions. If left unchecked, pests introduced by imported WPM have the potential to cause significant economic damage to the agricultural and forest resources of the United States.

The alternative of extending the China interim rule to all WPM worldwide (alternative 2 above) would not ensure long-term exclusion of some wood pests of quarantine concern, such as certain deep wood-borers, fungi, rots, and wilts. The adoption of the IPPC treatment standards for all importing countries will address pest threats posed not only by Cerambycidae, which was the primary target of the China interim rule, but nine other pest families as well. Additionally, adoption of the China interim rule requirements would result in the greatest additional use of methyl bromide of all the alternatives.

The comprehensive risk reduction program (alternative 4 above) would consist of an array of mitigation methods (*e.g.*, inspection, various heat treatments, various fumigants and other chemical treatments, irradiation, etc.) that is more extensive than that contained in either the China Interim Rule or the IPPC Guidelines. Many of the methods are in various phases of research and development that do not provide adequate basis for any final decisions about program usage.

Substitution of other packing materials (alternative 5 above) requires use of materials the cost of which exceed the likely costs of SWPM that is either heat treated or fumigated with methyl bromide.

Please see the FEIS for a full discussion of the reasons why adopting the IPPC standard was considered the preferred alternative.

Factors in the Decision

APHIS' mission is guided by the PPA, under which the detection, control, eradication, suppression, prevention, and retardation of the spread of plant pests or noxious weeds have been determined by Congress to be necessary and appropriate for the protection of the agriculture, environment, and economy of the United States. The PPA also has been designed to facilitate exports, imports, and interstate commerce in agricultural products and other commodities. In order to achieve these objectives, use of pesticides, including methyl bromide, has often been prescribed.

Methyl bromide is an ozone depleting substance that is strictly regulated under the Montreal Protocol and the Clean Air Act. While the goal of these authorities and agreements is to limit and ultimately phase out all ozone depleting substances, certain exemptions and exclusions are recognized, including an exemption for methyl bromide use for plant quarantine and preshipment purposes, including the purposes provided for in this final rule. The

[2] Copies of the FEIS are available for public inspection at USDA, room 1141, South Building, 14th Street and Independence Avenue, SW., Washington, DC, between 8 a.m. and 4:30 p.m., Monday through Friday, except holidays. Persons wishing to inspect copies are requested to call ahead on (202) 690–2817 to facilitate entry into the reading room. In addition, the FEIS may be viewed from the APHIS Internet site at *http://www.aphis.usda.gov/ppd/es/swpm.html*, and copies may be obtained by writing to the individual listed under **FOR FURTHER INFORMATION CONTACT**.

exemption is not unconditional, however. The United States, like other signatories to the Montreal Protocol, must review its national plant health regulations with a view to removing the requirement for the use of methyl bromide for quarantine and preshipment applications where technically and economically feasible alternatives exist.

This rule authorizes the use of methyl bromide, as well as heat treatment, to treat WPM imported from other countries in order to meet the mandates of the PPA. In addition, the Agency is working to promote environmental quality with ongoing work to identify and add to our regulations valid technically and economically feasible alternatives to methyl bromide.

Avoid or Minimize Environmental Harm

The environment can be harmed by using methyl bromide, in which case recovery of the ozone layer may be delayed, or by not using methyl bromide, in which case agriculture and forested ecosystems, among other aspects of environmental quality, could be devastated unless other equally or more effective alternatives were strictly enforced (*i.e.*, heat treatment or use of substitute packing materials). By assuring that use of methyl bromide is limited, the Agency strikes a proper balance in its efforts to minimize environmental harm. APHIS is committed to monitoring these efforts through the NEPA process, and otherwise. Furthermore, where appropriate, measures—gas recapture technology, for example—to minimize harm to environmental quality caused by methyl bromide emissions have been, and will continue to be, encouraged by APHIS. The prudent use of heat treatment and substitute packaging materials by developed nations is expected to promote this regulatory approach in developing countries as their trade opportunities expand.

Other

Methyl bromide used in quarantine applications prescribed by the United States contributes just a small fraction of total anthropogenic bromine released into the atmosphere. Nevertheless, the Montreal Protocol is action-forcing in the sense that signatories must review their national plant health regulations with a view to finding alternatives to exempted uses of methyl bromide. The EPA has also cautioned that, regardless of the incremental contribution, it is important to recognize that any additional methyl bromide releases would delay recovery of the ozone layer.

A considerable amount of research and development on methyl bromide alternatives has been conducted within the USDA and continues today. Under the Clean Air Act, EPA has also established a program to identify alternatives to ozone depleting substances, including methyl bromide, but EPA's listing of an acceptable alternative does not always adequately address its suitability for a particular use. We must not put agriculture and ecosystems at risk based on unproven technology.

APHIS is firmly committed to the objectives of the Montreal Protocol to reduce and ultimately eliminate reliance on methyl bromide for quarantine uses, consistent with its responsibilities to safeguard this country's agriculture and ecosystems. Achieving the objectives of both reducing (and ultimately eliminating) methyl bromide emissions as well as safeguarding agriculture and ecosystems in the most expeditious, cost-effective way possible, requires close coordination within the Federal Government of research, development, and testing efforts. APHIS is determined to cooperate actively with the Agricultural Research Service, EPA, the Office of Management and Budget, and others involved in this effort to find effective alternatives to quarantine methyl bromide uses.

In a notice summarizing EPA comments on recent environmental impact statements and proposed regulations that was published in the **Federal Register** on January 17, 2003 (68 FR 2539), EPA expressed no objection to the draft EIS and the APHIS proposed rule.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the information collection or recordkeeping requirements included in this rule have been approved by the Office of Management and Budget (OMB) under OMB control number 0579–0225.

Government Paperwork Elimination Act Compliance

The Animal and Plant Health Inspection Service is committed to compliance with the Government Paperwork Elimination Act (GPEA), which requires Government agencies in general to provide the public the option of submitting information or transacting business electronically to the maximum extent possible. For information pertinent to GPEA compliance related to this rule, please contact Mrs. Celeste Sickles, APHIS' Information Collection Coordinator, at (301) 734–7477.

List of Subjects in 7 CFR Part 319

Bees, Coffee, Cotton, Fruits, Honey, Imports, Logs, Nursery stock, Plant diseases and pests, Quarantine, Reporting and recordkeeping requirements, Rice, Vegetables.

■ Accordingly, 7 CFR part 319 is amended as follows:

PART 319—FOREIGN QUARANTINE NOTICES

■ 1. The authority citation for part 319 continues to read as follows:

Authority: 7 U.S.C. 450 and 7701–7772; 21 U.S.C. 136 and 136a; 7 CFR 2.22, 2.80, and 371.3.

■ 2. In § 319.40–1, the definitions for *Exporter statement*, *Importer statement*, and *Solid wood packing material* are removed, and two definitions are added in alphabetical order to read as follows:

§ 319.40–1 Definitions.

* * * * *

Regulated wood packaging material. Wood packaging material other than manufactured wood materials, loose wood packing materials, and wood pieces less than 6 mm thick in any dimension, that are used or for use with cargo to prevent damage, including, but not limited to, dunnage, crating, pallets, packing blocks, drums, cases, and skids.

* * * * *

Wood packaging material. Wood or wood products (excluding paper products) used in supporting, protecting or carrying a commodity (includes dunnage).

■ 3. In § 319.40–3, paragraph (b) is revised to read as follows:

§ 319.40–3 General permits; articles that may be imported without a specific permit; articles that may be imported without either a specific permit or an importer document.

* * * * *

(b) *Regulated wood packaging material.* Regulated wood packaging material, whether in actual use as packing for regulated or nonregulated articles or imported as cargo, may be imported into the United States under a general permit in accordance with the following conditions:

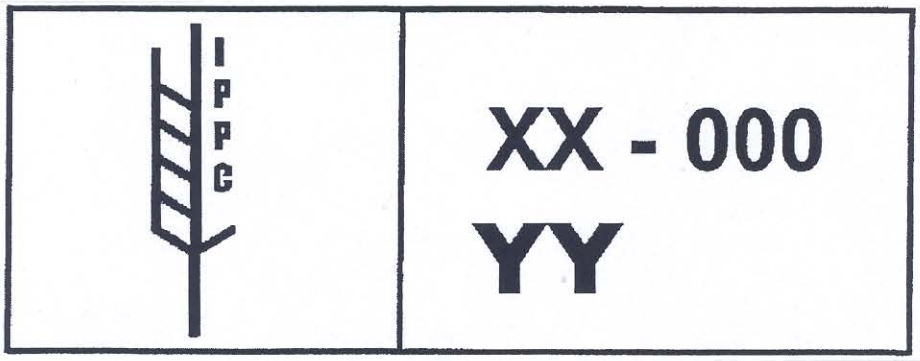
(1) *Treatment.* The wood packaging material must have been:

(i) Heat treated to achieve a minimum wood core temperature of 56 °C for a minimum of 30 minutes. Such treatment may employ kiln-drying, chemical pressure impregnation, or other treatments that achieve this specification through the use of steam, hot water, or dry heat; or,

(ii) Fumigated with methyl bromide in an enclosed area for at least 16 hours at the following dosage, stated in terms of grams of methyl bromide per cubic meter or pounds per 1,000 cubic feet of the enclosure being fumigated. Following fumigation, fumigated products must be aerated to reduce the concentration of fumigant below hazardous levels, in accordance with label instructions approved by the U.S. Environmental Protection Agency:

Temperature (°C/°F)	Initial dose g/m³ and lbs./1,000 c.f)	Minimum required concentration g/m³ and lbs./1,000 c.f.) after:			
		0.5 hrs	2 hrs.	4 hrs.	16 hrs.
21/70 or above	48/3.0	36/2.25	24/1.5	17/1.06	14/0.875
16/61 or above	56/3.5	42/2.63	28/1.75	20/1.25	17/1.06
11/52 or above	64/4.0	48/3.0	32/2.0	22/1.38	19/1.19

(2) *Marking.* The wood packaging material must be marked in a visible location on each article, preferably on at least two opposite sides of the article, with a legible and permanent mark that indicates that the article meets the requirements of this paragraph. The mark must be approved by the International Plant Protection Convention in its International Standards for Phytosanitary Measures to certify that wood packaging material has been subjected to an approved measure, and must include a unique graphic symbol, the ISO two-letter country code for the country that produced the wood packaging material, a unique number assigned by the national plant protection agency of that country to the producer of the wood packaging material, and an abbreviation disclosing the type of treatment (*e.g.*, HT for heat treatment or MB for methyl bromide fumigation). The currently approved format for the mark is as follows, where XX would be replaced by the country code, 000 by the producer number, and YY by the treatment type (HT or MB):



(3) *Immediate reexport of regulated wood packaging material without required mark.* An inspector at the port of first arrival may order the immediate reexport of regulated wood packaging material that is imported without the mark required by paragraph (b)(2) of this section, in addition to or in lieu of any port of first arrival procedures required by § 319.40–9 of this part.

(4) *Exception for Department of Defense.* Regulated wood packaging material used by the Department of Defense (DOD) of the U.S. Government to package nonregulated articles, including commercial shipments pursuant to a DOD contract, may be imported into the United States without the mark required by paragraph (b)(2) of this section.

* * * * *

(Approved by the Office of Management and Budget under control numbers 0579–0049 and 0579–0225.)

§ 319.40–5 [Amended]

■ 3. In § 319.40–5, paragraphs (b)(1)(i)(C), (b)(2), and (b)(2)(i), the words "solid wood packing materials" are removed each time they occur and the words "regulated wood packaging material" are added in their place, and paragraphs (g) through (k) are removed.

§ 319.40–10 [Amended]

■ 4. In § 319.40–10, footnote 6, the words "without a complete certificate or exporter statement" are removed and the words "without meeting the requirements of this subpart" are added in their place.

Done in Washington, DC, this 9th day of September 2004.

Bill Hawks,

Under Secretary for Marketing and Regulatory Programs.

[FR Doc. 04–20763 Filed 9–15–04; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

7 CFR Part 920

[Docket No. FV04–920–2 IFR]

Kiwifruit Grown in California; Decreased Assessment Rate

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Interim final rule with request for comments.

SUMMARY: This rule decreases the assessment rate and changes the assessable unit from $0.045 per 22-pound, volume-fill container or container equivalent to $0.002 per pound of kiwifruit established for the Kiwifruit Administrative Committee (committee) for the 2004–05 and subsequent fiscal periods. The assessment rate of $0.002 per pound of kiwifruit is $0.000045 per pound less than the assessment rate currently in

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NATURAL RESOURCES DEFENSE COUNCIL, INC., Plaintiff, - v - UNITED STATES DEPARTMENT OF AGRICULTURE, et al., Defendants.	05 Civ. 8005 (LMM) MEMORANDUM AND ORDER
STATE OF NEW YORK, PEOPLE OF THE STATE OF CALIFORNIA, EX REL. BILL LOCKYER, ATTORNEY GENERAL, STATE OF: CONNECTICUT and STATE OF ILLINOIS, Plaintiffs, - v - UNITED STATES DEPARTMENT OF AGRICULTURE, et al., Defendants.	05 Civ. 8008 (LMM)

McKENNA, D.J.,

1.

The Plant Protection Act ("PPA") (2000) provides (with an exception not relevant here) that

> no person shall import, enter, export, or move in interstate commerce any plant pest, unless the importation, entry, exportation, or movement is authorized under general or specific permit and is in accordance with such regulations as the Secretary [of Agriculture] may issue to prevent the introduction of plant pests into the United States

> or the dissemination of plant pests within the United States.

7 U.S.C. § 7112(a).

On September 16, 2004, the Animal and Plant Health Inspection Service ("APHIS") of the United States Department of Agriculture[1] amended, effective September 16, 2005, the regulations for the importation into the United States of unmanufactured wood articles used as packaging for cargo. 69 Fed. Reg. 55719-55733 (Sept. 16, 2004) (codified in 7 CFR, Pt. 319, § 319.40 (2006)).[2]

In explaining the amended regulations, APHIS noted that "[i]ntroductions into the United States of exotic plant pests such as the pineshoot beetle . . . and the Asian longhorned beetle . . . have been linked to the importation of [what the previous regulations called 'solid wood packing material' or 'SWPM']," and that "[t]hese and other plant pests that are carried by some imported SWPM pose a serious threat to U.S. agriculture and to natural, cultivated and urban forests." 69 Fed. Reg. 55719. The amended "regulations restrict the importation of many types of wood articles, including wooden packaging material such as pallets, crates, boxes, and pieces of wood used to support or brace cargo." Id. The standard embodied in the amended regulations "calls for

---

[1] APHIS and the Deputy Director of Plant Protection and Quarantine have been delegated authority to administer the PPA. See 7 CFR § 371.3.

[2] An Advance notice of proposed rulemaking was published in 1999, see 64 Fed. Reg. 3049-3052 (Jan. 20, 1999); a Proposed rule and notice of public hearings was published in 2003, see 68 Fed. Reg. 27480-27491 (May 20, 2003).

wood packaging material to be either heat treated or fumigated with methyl bromide, in accordance with the [Guidelines for Regulating Wood Packaging Material in International Trade, approved by the Interim Commission on Phytosanitary Measures of the International Plant Protection Convention on March 15, 2002], and marked with an approved international mark certifying treatment." Id. The regulations "will affect all persons using wood packaging material in connection with importing goods into the United States." Id.

APHIS also noted that "Methyl bromide as a class I ozone-depleting substance has been found to cause or contribute significantly to harmful effects on the stratospheric ozone layer. . . ." 69 Fed. Reg. 55721.

Plaintiffs[3] -- the Natural Resources Defense Council, Inc., and the states of New York, California, Connecticut and Illinois -- do not challenge specifics of the amended regulations, but, rather, in essence, the failure of APHIS to properly consider and weigh an unadopted alternative to heat treatment or fumigation with methyl bromide: "a phased transition away from raw wood pallets and crates, replacing them with packing materials made of substitute materials, such as processed wood, fiberboard, plywood, and plastics, that are impervious to the insect pests." (Pl. Mem. at 1.) That alternative, they urge, would at the same time afford the greatest protection against insect pests and also minimize the

[3] Plaintiffs' standing is not disputed.

destructive consequences to the ozone layer of fumigation with methyl bromide. Plaintiffs "do not seek to overturn the rule." (Pl. Responsive Mem. at 3.) Rather, they "ask the Court to order APHIS to reconsider its environmental impact analysis in light of its obvious defects and then to revise the rule as appropriate based on any supplemental findings." (Id.)

APHIS, plaintiffs contend, has violated both the National Environmental Protection Act ("NEPA") and the PPA in failing to consider the alternative they advocate.

Plaintiffs, jointly, move for summary judgment pursuant to Fed. R. Civ. P. 56, while defendants cross-move for dismissal pursuant to id. 12(b)(6) or, alternatively, summary judgment pursuant to id. 56. Whatever the form of the motions, in a case seeking review of agency action:

> "[T]he focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court." The task of the reviewing court is to apply the appropriate [Administrative Procedure Act ("APA")] standard of review, 5 U.S.C. § 706, to the agency decision based on the record the agency presents to the reviewing court.

Florida Power & Light Co. v. Lorian, 470 U.S. 729, 743-44 (1985) (quoting Camp v. Pitts, 411 U.S. 138, 142 (1973), and citing Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402 (1971)).[4]

[4] In what follows, "AR" refers to the Administrative Record, filed in CD-ROM form. The numbering system for the contents of the AR is described in Def. Mem. at 4 n.3.

The parties are in agreement that this Court's review of the challenged action is governed by the APA. (Pl. Mem. at 23; Def. Mem. at 26.)

> It is settled law that under the APA a reviewing court may set aside an agency's decision only if it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." A court may not substitute its judgment for that of the agency, and, when a particular controversy requires an agency's reconciliation of conflicting and overlapping congressional policies, a court "should hesitate to disturb the administrative determination."
>
> A successful challenge to an agency's decision under the arbitrary and capricious standard must clearly demonstrate that the agency "relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem [or] offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." A reviewing court may neither weigh alternatives available to the agency and then determine which is the more reasonable, nor resolve conflicts in the testimony "unless on its face it is hopelessly incredible."

Soler v. G. & U., Inc., 833 F.2d 1104, 1107 (2d Cir. 1987), cert. denied, 488 U.S. 832 (1988) (quoting 5 U.S.C. § 706(2)(A), Hudson Transit Lines, Inc. v. United States, 765 F.2d 329, 336 (2d Cir. 1985), Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co., 463 U.S. 29, 43 (1983), and NLRB v. Warrensburg Board & Paper Corp., 340 F.2d 920, 922 (2d Cir. 1965)) (other citations omitted). See also Environmental Defense v. United States Environmental Protection Agency, 369 F.3d 193, 201 (2d Cir. 2004).

2.

The parties, in substance, agree that both the introduction into the United States of destructive insect pests such as the Asian longhorned beetle and the release into the air of methyl bromide are seriously negative environmental events. Plaintiffs urge that the best way to deal with both is the option that would phase in a requirement that substitute or alternative packing materials replace the wood materials the new rule as promulgated will only regulate.

However, plaintiffs contend, even though APHIS acknowledged the reasonableness of the option that plaintiffs advocate[5] and indicated in its Advance notice of rulemaking that that option was to be considered (64 Fed. Reg. 3049, 3051 (Jan. 20, 1999)), and received substantial commentary on, and favoring, that option, it nevertheless did not really consider the option, and so failed to comply with NEPA's mandate that an agency "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 CFR § 1502.14(a). See also Natural Res. Def. Council, Inc. v. Callaway, 524 F.2d 79, 93 (2d Cir. 1975). All APHIS considered, as described by plaintiffs, "was the 'staw man' option of an immediate

[5] APHIS does not disagree that this option is, from an environmental point of view, the best. "Regarding alternative packing materials, the final environmental impact statement . . . concluded . . . that these would achieve the greatest possible reduction in risk from the introduction of pests and pathogens associated with [wood packing materials]" and would "generate[] only minimal amounts of ozone-depleting chemicals." 69 Fed. Reg. at 55721.

ban on raw wood packaging." (Pl. Mem. at 27.) And even the 'straw man" option, plaintiffs add, is not supported by the record. (Id. at 28-34.)

Plaintiffs also argue that the Final Environmental Impact Statement ("FEIS") and the new rule reflect "a highly skewed analysis of the environmental impacts of methyl bromide fumigation." (Id. at 34.) The estimates of the FEIS on which APHIS acted, plaintiffs urge, are severely flawed, unsupported by the record, and affected by inadequate conclusory assumptions. (Id. at 34-40.)[6]

Plaintiffs argue, in addition, that APHIS has violated the Plant Protection Act ("PPA"), emphasizing that the Act gives the Secretary (and thus, by delegation, APHIS (see n.1, supra)), authority "to prevent the introduction of plant pests into the United States," 7 U.S.C. § 7711(a) (emphasis added by plaintiffs), and states that it is the Secretary's responsibility to facilitate

[6] Plaintiffs vigorously dispute APHIS' estimate of the worldwide increase in methyl bromide usage that implementation of the rule will entail, 384 to 4630 metric tons per year. (Def. Mem. at 25.) (See FEIS, AR II.1, at 66-67.) At the close of the initial briefing of the parties' motions, defendants advised the Court that one of the assumptions underlying APHIS' estimates was flawed: i.e., the assumption "that all [methyl bromide] fumigation would occur 'pre-loading,' rather than 'post-loading.'" (Def. Mem. at 45.) "APHIS now concedes that the justification for the [methyl bromide] estimate in the [FEIS] was flawed; the agency erred in asserting that shippers in China eventually began to fumigate all [wood packing material] prior to loading." (Letter, A.U.S.A. Turner to Court, June 21, 2006, at 3.) "Fumigating 'post-loading' requires much more methyl bromide than fumigating 'pre-loading'. . . ." (Id. at 2.) APHIS is developing a revised estimate. (Id.)

commerce "in ways that will reduce, to the extent practible, as determined by the Secretary, the risk of dissemination of plant pests. . . ." Id. § 7701(3) (emphasis added by plaintiffs). The PPA, plaintiffs argue, "requires APHIS to adopt the most effective practicable alternative. The statute does not authorize the agency to set an arbitrary level of 'acceptable' pest risk, or 'necessary' pest protection, such that APHIS may reject more effective alternative methods that are practicable." (Pl. Mem. at 41.) In the present situation, plaintiffs conclude, "APHIS itself identifies an alternative that eliminates the risk [i.e., the phase-in of substitute packing material as advocated by plaintiffs, and] APHIS must fully and fairly evaluate that alternative to determine if it is practicable, and if so, adopt it." (Id. at 42.)

3.

The Secretary, while not accepting plaintiffs' arguments, also goes beyond them to explain why it chose to adopt "a set of internationally approved standards currently being implemented by the United States' trading partners around the world, including Canada, the European Union, China, and many others," (Def. Mem. at 1), and to describe the legal context for its action.

The PPA, enacted in 2000, provides that "[t]he Secretary [of Agriculture] shall ensure that phytosanitary[7] issues involving

[7] "Phytosanitary" means relating to protection against threats to plant health. See Def. Mem. at 4 n.2.

imports and exports are addressed based on sound science and consistent with applicable international agreements." 7 U.S.C. § 7751(e).[8]

In the new rule, APHIS adopted what it described as "an international standard entitled 'Guidelines for Regulating Wood Packaging Material in International Trade' that was approved by the Interim Commission on Phytosanitary Measures of the International Plant Protection Convention ["IPPC"] on March 15, 2002." 69 Fed. 55719. The IPPC is an organization of some 117 contracting parties of which the United States is one, the purpose of which "is to secure common and effective action to prevent the spread of pests of plant products, and to promote appropriate measures for their control. (Guide to the International Plant Protection Convention [AR VI.2], at 2.) In March of 2002, the IPPC promulgated its International Standards for Phytosanitary Measures: Guidelines for Regulating Wood Packaging Material in International Trade. ("IPPC Guidelines.") (AR III.39.) APHIS followed, in substance, those Guidelines.

[8] Legislative history indicates that one of the three main goals of the PPA was to "[f]acilitate agricultural trade in compliance with international obligations and standards." H.R. Rep. 106-1042 (2001), at 14-15.

4.

The Court considers first plaintiffs' argument that APHIS, in adopting the new rule, violated the PPA. The argument is not persuasive.

Plaintiffs' position, in essence, is that the PPA, in 7 U.S.C. §§ 7712(a) and 7701(3), requires APHIS to adopt the rule that will most effectively reduce pest risk, and that that is the end of the question. (See Pl. Mem. at 40-42; Pl. Responsive Mem. at 16-18; Section 3 of this Memorandum and Order, supra.) That view is both too narrow and not supported by the language of the PPA.

In the first place, the Supreme Court has pointed out that its decision in Vermont Yankee Nuclear Power Corp v. Natural Res. Def. Council, Inc., 435 U.S. 519, 558 (1978), "cuts sharply against the . . . conclusion that an agency, in selecting a course of action, must elevate environmental concerns over other appropriate considerations." Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227 (1980) (per curiam).

In the second place, the PPA mandates the consideration of factors other than the environment.

7 U.S.C § 7701(3), on which plaintiffs explicitly rely, states that "it is the responsibility of the Secretary to facilitate exports, imports, and interstate commerce in

agricultural products and other commodities that pose a risk of harboring plant pests or noxious weeds," id., but goes on to add that the Secretary is to do so "in ways that will reduce, to the extent practicable, as determined by the Secretary, the risk of dissemination of plan pests or noxious weeds." Id. It is clear, therefore, that in adopting the rule, the Secretary, acting through APHIS, in addition to reducing the risk of plant pests, is obliged as well to consider the facilitation of commerce. What is more, the use of the phrase "to the extent practicable, as determined by the Secretary," id., makes it clear that, in considering the rule and the alternatives, the Secretary, acting through APHIS, is given room for "the application of agency expertise and discretion." See Conservation Law Foundation v. Evans, 360 F.3d 21, 28 (1st Cir. 2004). Facilitation of commerce certainly entered into the decision to adopt the new rule. See 69 Fed. Reg. 55721 ("Alternative packing materials [involve] a cost that is currently beyond the reach of exporters in many developing countries. . . .") and id. 55722 (". . . prohibiting the use of unmanufactured wood as a packaging material would have significant negative consequences in economic and environmental arenas. Wood is often the only packaging material readily and cheaply available . . . in developing countries that export basic products without elaborate packaging.")

Finally, the PPA requires the Secretary ("[t]he Secretary shall. . . .") to ensure that phytosanitary issues involving imports and exports are . . . consistent with applicable international agreements." 7 U.S.C. § 7751(e). As described above, the new regulations are based on the IPPC Guidelines and are fully consistent with applicable international agreements.[9]

In short, the PPA, as applied to the present dispute, vests the Secretary with the duty of crafting a rule that will reduce the risk of plant pests consistently with applicable international agreements and at the same time facilitate international commerce, and discretion to weigh the facts and issues in so doing. The record is clear that the Secretary, acting through APHIS, did so in the present case.

Plaintiffs have not shown that the adoption by APHIS of the new rule violated the PPA.

---

[9] For a full description of the international background to APHIS' use of the IPPC Guidelines, see Def. Mem. at 3-6.

Plaintiffs argue that APHIS need not have followed the IPPC Guidelines in order to be consistent with international agreements because the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures ("SPS Agreement") (AR VI.8), which, among other things, seeks to protect trade by eliminating trade protectionist actions, "allow[s] members to impose higher levels of [phytosanitary] protection than required by international standards if a member concludes (based on scientific and economic factors recognized as valid under the Agreement) that the international standards do not provide adequate protection." (Def. Mem. at 5 (summarizing SPS Agreement, Art. 3, cl. 1 [AR VI.8 at 2].) However, the SPS Agreement also "provides a safe harbor for measures that do conform to international standards." (Id. (summarizing SPS Agreement, Art. 3, cl. 2 [AR VI.8 at 2].) The "safe harbor" obtained by following the IPPC Guidelines is certainly of value in facilitating trade by avoiding trade disputes (see Def. Reply Mem. at 14-15), and the choice to follow the IPPC Guidelines was well within the Secretary's discretion.

The Court considers next plaintiffs' arguments under NEPA.

5.

The purpose and basic requirements of NEPA were classically summed up in Sierra Club v. United States Army Corps of Engineers, 701 F.2d 1011 (2d Cir. 1983):

> As the Supreme Court has stated repeatedly, although NEPA established "'significant substantive goals for the Nation,'" the balancing of the substantive environmental issues is consigned to the judgment of the executive agencies involved, and the judicially reviewable duties that are imposed on the agencies are "'essentially procedural.'" "The only role for a court is to insure that the agency has taken a 'hard look' at environmental consequences; it cannot 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.'"
>
> The primary function of an environmental impact statement under NEPA is "'to insure a fully informed and well-considered decision,' [although] not necessarily 'a decision the judges of the Court of Appeals or of [the Supreme] Court would have reached had they been members of the decisionmaking unit of the agency.'" In order to fulfill its role, the [Environmental Impact Statement ("EIS")] must set forth sufficient information for the general public to make an informed evaluation, and for the decisionmaker to "consider fully the environmental factors involved and to make a reasoned decision after balancing the risks of harm to the environment against the benefits to be derived from the proposed action." In so doing, the EIS insures the integrity of the process of decision by giving assurance that stubborn problems or serious criticisms have not been "swept under the rug." The "'detailed statement'" required by § 102(2)(C) of NEPA [, 42 U.S.C. § 4332(2)(C),] thus "is the outward sign that environmental values

> and consequences have been considered during the planning stage of agency actions."

Id. at 1029 (quoting Strycker's Bay, 444 U.S. at 227, Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976), County of Suffolk v. Secretary of the Interior, 562 F.2d 1368, 1375 (2d Cir. 1977), cert. denied, 434 U.S. 1064 (1978), Silva v. Lynn, 482 F.2d 1282, 1285 (1st Cir. 1973), and Andrus v. Sierra Club, 422 U.S. 347, 350 (1979)) (other citations omitted). See also Stewart Park & Reserve Coalition, Inc. v. Slater, 352 F.3d 545, 557-58 (2d Cir. 2003).

Here, in the FEIS (AR II.1.), APHIS, noting the "nature and severity of the risk from the wood packing material accompanying shipments in international trade," stated that it proposed "to adopt the IPPC Guidelines while it considers the need for a more long-term and permanent solution to the [wood packing material] problem." (FEIS at 3.) It considered that and four alternatives:

> (1) No Action (no change in the current regulation), (2) Extension of the Treatments in the China Interim Rule to All Countries, (3) Adoption of the IPPC Guidelines, (4) a Comprehensive Risk Reduction Program, and (5) Substitute Packing Materials Only. Each of the alternatives consists of specific component methods for the mitigation of risk from [wood packing material].

(Id. at 9.)[10] The possible environmental consequences of the five alternatives are reviewed in the FEIS.

The FEIS acknowledges that "the prohibition of SWPM and the requirement to switch to substitute packing materials would result in substantially less pest and disease risk than any of the other components considered in this [F]EIS." Id. at 42. The effects of methyl bromide on the ozone layer are considered in detail. Id. at 54-57. And the FEIS further acknowledges that "[]he logical response to address the issue of methyl bromide use relative to ozone depletion potential is to promote the use of alternate phytosanitary methods (such as substitute packing materials) to deal with [solid wood packing materials] used in international trade." Id. at 78. For reasons summarized above, however, APHIS did not adopt that approach.

6.

Plaintiffs argue that there are three ways in which APHIS failed to comply with NEPA.

First, plaintiffs contend that APHIS did not consider the option of a phase-in of substitute materials, but only the "straw man" of an immediate replacement of wooden with substitute packing materials. The record does not support this argument.

---

[10] The China Interim Rule refers, collectively, to two rules promulgated by APHIS in 1998 governing wood packing material applicable to shipments from China only: 63 Fed. Reg. 50,100 (Sept. 18, 1998), and 63 Fed. Reg. 69,539 (Dec. 17, 1998).

In its Advance Notice of Proposed Rulemaking, in 1999, APHIS pointed out that one option for dealing with the problems it wished to address was the prohibition of the usual wood packaging materials in favor of alternative materials such as processed wood and nonwood materials. Noting that such action could have an undesirable effect on international trade, it added that "[t]his effect could be mitigated by a phase-in period to allow shippers to adjust to the prohibition. . . ." 64 Fed. Reg. 3049, 3051. The Draft Environmental Impact Statement ("DEIS") of October 2002 (AR II.2) discusses the substitute materials option (see DEIS at 12, 36-39, 73-77), and notes that substitute materials "may require a phase-in period to allow the industry to adopt these materials to the shipping processes." (DEIS at 37; see also id. at 75.) The FEIS notes that "[s]ubstitute packing materials would require a phase-in period to allow the industry of the regulated countries to adapt these materials to the shipping processes." (FEIS [AR II.1] at 41; see also id. at 81.)

Second, plaintiffs urge that the FEIS "failed to examine rationally the amount of ozone-destroying methyl bromide that will be used due to the [new] Rule." (Pl. Responsive Mem. at 1.) In support of this argument, plaintiffs identify two instances in which APHIS had estimated ranges of amounts of methyl bromide that would be released as a result of rulemaking that, plaintiffs argue,

are not consistent with the range of 384 to 4630 metric tons given in the FEIS. (FEIS [AR II.1] at 66-67.)

The first instance relates to the China Interim Rule. (See n.9, supra.) In a September 18, 1998 Interim Rule and Request for Comments, APHIS stated that it "estimates that, if China were to comply with the interim rule by fumigating SWPM shipments with methyl bromide, China could use between 1,040 and 12,565 metric tons of methyl bromide annually." 63 Fed. Reg. 50100, 50109. This range is referenced in the FEIS in the present case (FEIS [AR II.1] at 29; 56), and noted to be based on "conservative assumptions." (Id.) The FEIS explains that "[t]he actual [quarantine and preshipment] usage from the China Interim Rule is known to be considerably less than anticipated from the risk analysis due to the analysis assumption that loaded cargo with SWPM would be fumigated rather than fumigation of SWPM prior to cargo loading," while "[i]t is known that most shippers fumigate SWPM prior to cargo loading to lower costs, avoid agricultural commodity tolerance issues, and to prevent damage to sensitive commodities." (Id. at 56.) Defendants now concede that this last statement is not correct. (See n.6, supra.)

The second instance cited by plaintiffs is from a Final Environmental Impact Statement of September 2002, relating to a Rule for the Importation of Unmanufactured Wood Articles from Mexico, with Consideration for Cumulative Impact of Methyl Bromide

Use (AR II.35), where it is noted that the rule there under consideration (affecting, it appears, trade between the United States and Mexico only) "could result in potential releases to the atmosphere ranging from 8,536 [metric tons] to 102,893 [metric tons] per year based upon information from trade summaries." (Id. at 65.) While the Mexico Environmental Impact Statement is referenced in the FEIS in the present case (AR II.1 at 57, 90), the estimated methyl bromide release figures do not appear to be set forth there.

Defendant initially argued that the Mexico Rule Environmental Impact Statement analysis was a "worst-case scenario" that assumed that all fumigation would occur post-loading "as the China Interim Rule estimate assumed," and pointed out that the Mexico Rule Environmental Impact Statement "concluded that the 'actual increase in methyl bromide usage would actually be closer to one-twentieth' of this 'worst-case scenario' amount, equating to an additional release of 427 to 5,145 [metric tons] per year." (Def. Mem. at 45 (citing AR II.35 at 66).)

The Mexico Rule Environmental Impact Statement states that: "As was shown with the interim rule for China, SWPM is more likely to be treated prior to use in loading the commodity, so the actual increase in methyl bromide usage would actually be closer to one-twentieth (1/20) of the projected usage in this assessment." (AR II.35 at 65-66 (footnote omitted).)

Two things appear from the Mexico Rule Environmental Impact Statement: first, that the assumption used to support the low estimate of annual methyl bromide releases attributable to the Mexico Rule is the same assumption that supports the low estimate in the case of the China Interim Rule, and is derived from the China Interim Rule assumption that most fumigation will occur pre-loading (now conceded to be erroneous); and, second, that the difference in the amount of methyl bromide releases between post-loading fumigation and pre-loading fumigation, respectively, is approximately 20 to 1.

Defendants have already stated a willingness, prompted by the flawed assumption described in the government's letter of June 21, 2006 (see n.6, supra), to produce a supplemental Environmental Impact Statement which will include a new methyl bromide release estimate. (Gov't Supp. Mem. at 1.) That estimate must also include consideration of the methyl bromide release estimate contained in the Mexico Rule Final Environmental Impact Statement of September 2002 discussed above.

Plaintiff's third argument in support of its claim that APHIS violated NEPA is that APHIS committed to the course of action it finally took before undertaking an Environmental Impact Statement and that "such predetermined conclusions are invalid as a matter of law under NEPA." (Pl. Responsive Mem. at 2.) This argument is not persuasive.

It is true that at least as early as the DEIS of October 2002 APHIS was proposing to adopt the IPPC Guidelines (see DEIS [AR II.2] at iii), which, in the FEIS, APHIS identified as its "preferred alternative." (FEIS [AR II.1] at 3.) There is nothing wrong, however, with an agency having a proposal or preferred alternative in mind when it enters into the Environmental Impact Statement process. Indeed, NEPA contemplates that it will. See 42 U.S.C. § 4332(2)(C)(1) (every recommendation or report on proposals for major federal actions significantly affecting quality of human environment to include statement on "proposed" action); see also 40 CFR § 1502.14 (environmental impact statement to present environmental impacts of "the proposal and the alternatives").

For the reasons discussed above in this section of this Memorandum and Order, the Court finds that APHIS has not violated NEPA except in the matter of its estimate of the amount of methyl bromide that will be released into the atmosphere by reason of the rule at issue. In that regard, however, APHIS (even though its failures may be inadvertent) has not complied with NEPA but rather acted arbitrarily and capriciously in that (i) its assumption that pre-loading fumigation will substantially replace post-loading fumigation is flawed, (ii) that flaw affects the methyl bromide release findings of the FEIS in a significant way, and (iii) the relation of its much higher estimates in connection with the China Interim Rule and the Mexico Rule to the present situation have not

been considered adequately, or, if they have been, have not been adequately explained in the FEIS.

APHIS is to prepare and circulate a supplemental Environmental Impact Statement including a corrected estimate of the amount of methyl bromide that will be released annually, taking into consideration the higher estimates reached in connection with the China Interim Rule and the Mexico Rule, and explaining its views on the environmental impact of such new information and how that affects its decision to proceed or not with the rule at issue now in effect. The supplemental Environmental Impact Statement must articulate a satisfactory relationship between the facts found and the choice made. Waterkeeper Alliance, Inc. v. United States Environmental Protection Agency, 399 F.3d 486, 498 (2d Cir. 2005).[11]

APHIS must, after considering its new methyl bromide release estimate, evaluate its rulemaking decision anew. "Although an [Environmental Impact Statement] may be supplemented, the critical agency decision must, of course, be made after the supplement has been circulated, considered and discussed in the light of the alternatives, not before. Otherwise the process becomes a useless ritual, defeating the purpose of NEPA, and rather making a mockery of it." Natural Resources Defense Council, Inc.

[11] Apart from revision of methyl bromide release information and consideration of APHIS' rulemaking action in light of the new information, the Court sees no need for supplementation of the FEIS in other respects unless APHIS believes it to be appropriate.

v. Callaway, 524 F.2d 79, 92 (2d Cir. 1975). The amount of methyl bromide that will be released is too significant a question to treat as a mere correctible inaccuracy to be made without considering the impact of new information. (Cf. Def. Supp. Mem. at 3 (citing Sierra Club, 701 F.2d at 1035).) A corrected methyl bromide estimate in a supplemental Environmental Impact Statement cannot be regarded as a matter wholly unrelated to APHIS' rulemaking, as defendants may be suggesting. (See Def. Supp. Mem. at 4.)

The Court does not impose a schedule because it understands the revision of the methyl bromide release information to be in progress, and is confident that the Secretary will act with reasonable promptness.

7.

For the reasons set forth above plaintiffs' motion is granted in part and denied in part and defendants' motion is granted in part and denied in part, and this matter is remanded to the Secretary for action consistent herewith.[12]

SO ORDERED.

Dated: June 4, 2007

Lawrence M. McKenna
U.S.D.J.

[12] The Clerk will close both of the above cases.

(This page is intentionally left blank.)

Appendix E. Calculations of Methyl Bromide Released From Fumigation of Wood Packaging Material

Description of Calculations Used in the Supplemental Environmental Impact Statement for Estimation of Methyl Bromide Released From Fumigation of Wood Packaging Material

The quantitative assessment of methyl bromide usage in the treatment of wood packing material (WPM) involves consideration of many factors with variable levels of definition and uncertainty. This appendix is prepared to assist the reader in better understanding the basis for the calculations and those factors that were considered in the development of the equation used to make methyl bromide estimates.

The majority of NPPOs in the International Plant Protection Convention (IPPC) countries do not compile records for usage of methyl bromide specifically for treatment of WPM in compliance with International Standards for Phytosanitary Measures Number 15 (ISPM 15) guidelines. The most recent year with complete data on U.S. Customs entries of imported articles is 2005 and, therefore, all calculations use information for 2005 as the basis for quantification of methyl bromide associated with ISPM 15 compliance. Other than the actual pounds of methyl bromide provided by the NPPOs for the country of Nicaragua (Hernandez, 2006), determinations of methyl bromide quantities in this supplemental environmental impact statement (SEIS) were calculated relative to the number of WPM units treated in 2005. Data on the actual number of WPM units fumigated with methyl bromide in 2005 in the United States for export purposes in 2005 have been tracked (Deomano, 2006a); however, the NPPOs of other countries lack data on the exact numbers of WPM units fumigated. As part of the analyses for the China Interim Rule Environmental Assessment (EA), a comprehensive review of all U.S. Customs entries was conducted to ascertain the number of entries containing WPM. The combined effort of reviewing entries by U.S. Customs and APHIS conservatively estimated that 30 percent of all entries were packed with WPM. Use of this estimated percentage of entries containing WPM has been applied to calculations of the number of WPM units in all documentation since the China Interim Rule EA. It was also recognized that individual U.S. Customs entries may pertain to a single pallet, a single container, or multiple containers. In the absence of detailed information, the average U.S. Customs entry is viewed to pertain to one cargo container and calculations are based upon fumigation of WPM for that unit size.

The general equation used in this SEIS for calculation of the metric tons (MT) of methyl bromide released from WPM fumigations in 2005 is as follows:

MT of methyl bromide = (# of U.S. Customs entries with WPM) x (fraction of WPM entries fumigated with methyl bromide) x (lbs methyl bromide per entry) x (0.45359237 kg/lb) x (1 MT/1,000 kg) x (fraction of total methyl bromide applied that is vented from fumigation chamber)

The equation consists of two constants used for converting the weight in pounds to the weight in MT and of four variables:

The derivation of the first variable, # of U.S. Customs entries with WPM, was described above.

The second variable, the fraction of WPM entries fumigated with methyl bromide, is based upon information provided by the NPPOs of the country/countries being analyzed.

The third variable, pounds of methyl bromide per entry, is dependent upon the manner in which the fumigations are conducted. It is derived partly from information about the conduct of fumigations provided by the NPPOs of the country/countries being analyzed and from the quantity of methyl bromide required to fumigate WPM in that manner. The mathematical derivation of this variable for different fumigation processes is provided in the second paragraph that follows.

The fourth variable, fraction of the total methyl bromide applied that is vented from the fumigation chamber, relates to the sorption of methyl bromide by WPM. This sorption of methyl bromide precludes its release to the atmosphere and, therefore, poses no risk of damage to the ozone layer. The percentage of methyl bromide vented from fumigations of durable goods, such as WPM, was determined to range from 69 to 79 percent of the total methyl bromide applied (UNEP, MBTOC, 1998); therefore, the original lower estimates apply a fraction of 0.69, and the original higher estimates apply a fraction of 0.79. This percentage of methyl bromide vented from fumigations of durable goods was revised upward in a more recent document (page 69 of UNEP, MBTOC, 2007) to range from 76 to 88 percent of total methyl bromide applied, so present lower estimates apply a fraction of 0.76 and present higher estimates apply a fraction of 0.88.

The mathematical derivation of the third variable, pounds of methyl bromide per entry, is dependent upon how the fumigation of WPM with methyl bromide is conducted. Although all treatments of WPM are conducted with from 3 to 4 pounds of methyl bromide per 1,000 cubic feet of space, the relative methyl bromide usage per unit treated may be increased by fumigating WPM that is already loaded with other cargo, as occurs at some locations in China, or decreased by fumigating the wood pieces prior to assembling the WPM unit, as occurs in Japan. Most shippers neither fumigate the wood pieces prior to assembling WPM units nor load WPM with cargo prior to fumigation, but the methyl bromide estimates in this SEIS consider comprehensively the manner in which the WPM units are fumigated.

There are five different methods of fumigation of WPM that have been commonly used and are considered in this SEIS. If there is no information available about the manner in which WPM is being fumigated in a given country, the fumigation is presumed to occur in tarped containers after cargo is already loaded on the WPM. This provides a conservatively high estimate for those countries where data are lacking. Other methods are applied to countries where reliable information about compliance has been received. The fumigation methods, quantities of methyl bromide associated with each method, and a representative example of calculations used in this SEIS for each method are as follows:

Method 1: Treatment of Assembled WPM in Tarped Containers After Loading of Cargo

For 40-foot Container Tarp Fumigation:
40 ft long x 9 ft wide x 15 ft tall = 5,400 cu ft treated
Range of lbs of methyl bromide/entry = 16.2 to 21.6 lbs

For 20-foot Container Tarp Fumigation:
20 ft long x 9 ft wide x 15 ft tall = 2,700 cu ft, rounded up to 3,000 cu ft. treated
Range of lbs of methyl bromide/entry = 9 to 12 lbs

Example of Method 1—Countries lacking information about fumigation of WPM where fumigation is assessed to occur after loading for 50% of WPM that is fumigated.

Variables specific to this calculation:
# of U.S. Customs entries with WPM = 505,838 entries
Fraction of WPM entries fumigated with methyl bromide = 0.5
lbs methyl bromide per entry = 9 pounds (low) to 21.6 pounds (high)

Lower estimate = 505,838 x 0.5 x 9 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.76 = 785 MT

Upper estimate = 505,838 x 0.5 x 21.6 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.88 = 2,181 MT

Method 2: Treatment of Assembled WPM in Sealed Containers After Loading of Cargo

For 40-foot Container Interior Fumigation:
40 ft long x 8 ft wide x 10 ft tall = 3,200 cu ft treated
Range of lbs of methyl bromide/entry = 9.6 to 12.8 lbs

For 20-foot Container Interior Fumigation:
20 ft long x 8 ft wide x 10 ft tall = 1,600 cu ft treated
Range of lbs of methyl bromide/entry = 4.8 to 6.4 lbs

Example of Method 2—China, where fumigation occurs after loading, for the assessed 50% of WPM that is fumigated

Variables specific to this calculation:
# of U.S. Customs entries with WPM = 2,698,237 entries
Fraction of WPM entries fumigated with methyl bromide = 0.5
lbs methyl bromide per entry = 4.8 pounds (low) to 12.8 pounds (high)

Lower estimate = 2,698,237 x 0.5 x 4.8 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.76 = 2,232 MT

Upper estimate = 2,698,237 x 0.5 x 12.8 lbs x 0.45359237 kg/lb x 1MT/1,000 kg x 0.88 = 6,893 MT

Method 3: Treatment of Assembled WPM in Tarped Containers Before Loading of Cargo

Packaging material for 20 U.S. Customs entries all tarp fumigated in same container (95% less usage of methyl bromide) resulting in range one-twentieth of those values determined in method 1.

Range of lbs of methyl bromide/entry = 0.45 to1.08 lbs

Example of Method 3—Australia and New Zealand, where fumigation occurs prior to loading, for the 10 to 20% of WPM that is fumigated.

Variables specific to this calculation:
# of U.S. Customs entries with WPM = 67,656 entries
Fraction of WPM entries fumigated with methyl bromide = 0.1 (low) to 0.2 (high)
lbs methyl bromide per entry = 0.45 pounds (low) to 1.08 pounds (high)

Lower estimate = 67,656 x 0.1 x 0.45 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.76 = 1.05 MT

Upper estimate = 67,656 x 0.2 x 1.08 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.88 = 5.83 MT

Method 4: Treatment of Assembled WPM in Sealed Containers Before Loading of Cargo

Packaging material for 20 U.S. Customs entries all fumigated in same sealed container (95% less usage of methyl bromide) resulting in range one-twentieth of those values determined in method 2.

Range of lbs of methyl bromide/entry = 0.24–0.64 lbs

Example of Method 4—Hong Kong, where fumigation occurs prior to loading, for the assessed 50% of WPM that is fumigated.

Variables specific to this calculation:
# of U.S. Customs Entries with WPM = 115,640 entries
Fraction of WPM entries fumigated with methyl bromide = 0.5
lbs methyl bromide per entry = 0.24 pounds (low) to 0.64 pounds (high)

Lower estimate = 115,640 x 0.5 x 0.24 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.76 = 4.78 MT

Upper estimate = 115,640 x 0.5 x 0.64 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.88 = 14.8 MT

Method 5: Treatment of Unassembled WPM in Tarped Containers Before Loading of Cargo

Packaging material for 50 U.S. Customs entries all tarp fumigated in same container (98% less usage of methyl bromide) resulting in range one-fiftieth of those values determined in method 1.

Range of lbs of methyl bromide/entry = 0.18 to 0.432 lbs

Example of Method 5—Japan, where fumigation occurs prior to loading, for the 5 to 10% of WPM that is fumigated.

Variables specific to this calculation:
# of U.S. Customs entries with WPM = 742,134 entries
Fraction of WPM entries fumigated with methyl bromide = 0.05 (low) to 0.1 (high)
lbs methyl bromide per entry = 0.18 pounds (low) to 0.432 pounds (high)

Lower estimate = 742,134 x 0.05 x 0.18 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.76 = 2.3 MT

Upper estimate = 742,134 x 0.1 x 0.432 lbs x 0.45359237 kg/lb x 1 MT/1,000 kg x 0.88 = 12.8 MT

Other Factors Considered But Not Applied to Refine the Methyl Bromide Equation

There are no hard figures for how much WPM is reused worldwide after cargo has been unloaded. We know from life-cycle studies that some WPM can be reused for 8 to10 separate shipments before the wood is no longer durable enough to handle the loaded cargo (Deomano, 2006b). The United States does reuse treated pallets that meet ISPM 15 criteria and data are collected about how much WPM is reused. Review of the present rate of reuse in the United States indicates that one of every two WPM units is recycled and reused for shipping another load of cargo (Deomano, 2006b). Some countries are known to recycle more WPM than the United States; however, information about the actual rates of reuse by other countries is not readily available. Accordingly, we did not apply this information to any refinements of the methyl bromide release model. By disregarding this issue in the quantitative analysis, our calculated figures overestimate the number of WPM units treated by 50% or more. The lower usage of methyl bromide associated with less frequent need to treat WPM is, therefore, not reflected in the present estimates of methyl bromide released or in previous estimates from the final environmental impact statement. As information related to this topic becomes available, continuing refinements of the methyl bromide estimates may be made in the future to more closely reflect actual usage.

Some commodities are not marketable if fumigated with methyl bromide; some agricultural commodities lack a tolerance for bromine residues; some commodities, such as leather, react with methyl bromide such that strong odors are imparted to the product; and some commodities, such as electronics, may be damaged by reaction with methyl bromide. Treatment of such commodities is precluded from methods, such as methyl bromide fumigation after loading, due to the loss of product. When the assumption is made that the predominant method of fumigation in China occurs to WPM with cargo already loaded, it is known that the calculations from this

assumption will overstate the release of methyl bromide. This is clearly true for the early estimates made for the China interim rule and for the present analysis in this SEIS where this assumption was applied to China and other countries lacking information regarding their treatment methodology for ISPM 15 compliance. Although there is no detailed data available to support a precise estimate of methyl bromide usage in our model, this approach does ensure that underestimation of potential release of methyl bromide from fumigations for China and these other countries does not occur in this model.

How the Wood Packaging Material Industry Complies With the ISPM 15 Guidelines for Movement of WPM in World Trade:

Total number of U.S. Customs entries in 2005 containing WPM = 14,079,662 – WPM from 230 countries.

Total number of U.S. Customs entries in 2005 not first subject to APHIS regulations under the WPM Rule = 8,283,350 (58.8% of total U.S. Customs entries with WPM).

- Total number of U.S. Customs entries in 2005 containing WPM and not subject to APHIS WPM Rule (Canada and Mexico) = 5,469,473 (38.8% of total U.S. Customs entries with WPM).

- Total number of U.S. Customs entries in 2005 containing WPM and already subject to APHIS regulations under China Interim Rule (China and Hong Kong) = 2,813,877 (20% of total U.S. Customs entries with WPM).

Total number of U.S. Customs entries in 2005 first subject to APHIS regulation under the WPM Rule = 5,796,312 (41.2% of total U.S. Customs entries with WPM).

- Total number of U.S. Customs entries in 2005 containing WPM that is treated solely by heat treatment to comply with APHIS WPM rule = 2,893,701 (20.6% of total U.S. Customs entries with WPM, 49.9% of U.S. Customs entries first subject to APHIS regulation under the WPM Rule) – WPM from 139 countries.

- Total number of U.S. Customs entries in 2005 containing WPM that is exported from countries where compliance with APHIS WPM rule involves some methyl bromide fumigation = 2,902,611 (20.6% of total U.S. Customs entries with WPM, 50.1% of U.S. Customs entries first subject to APHIS regulation under the WPM Rule) – WPM from 22 countries with compliance information and WPM from 65 countries lacking compliance information.

By country/group:

Australia/New Zealand = 67,656
Japan = 742,134
Korea = 219,699
Latin American Countries = 195,479
Mercosur Countries = 193,122
Nicaragua = 9,369
Taiwan = 377,858
Other S.E. Asian countries = 591,456
Other Countries = 505,838 (entries lacking compliance data = 3.6% of total U.S. Customs entries with WPM, 8.7% of U.S. Customs entries first subject to APHIS regulation under the WPM Rule) - WPM from 65 countries.

Breakdown of Classification of Countries According to Treatment of WPM in Compliance With ISPM 15 Based Upon U.S. Customs Reporting (46,932,208 Total U.S. Customs Entries From 230 Countries in 2005)

Countries (226) analyzed as part of direct impacts of WPM Rule (41.2% of U.S. Customs Entries in 2005)

Countries (139) Reported To Only Heat Treat WPM Or Use Only Substitute Packaging Materials In Compliance With ISPM 15/APHIS Regulations (20.6% of U.S. Customs entries in 2005)

European Countries and Associated Territories—45 Countries

Andorra	Finland	Greenland	Luxemburg	San Marino
Austria	France	Guadaloupe	Malta	Slovak Republic
Belgium	French Guiana	Hungary	Martinique	Slovenia
Cyprus	French Micronesia	Iceland	Monaco	Spain
Czech Republic	French Polynesia	Ireland	Netherlands	Svalbard, May Island
Denmark	French S & Antarctic Lands	Italy	Norway	Sweden
Estonia	Germany	Latvia	Poland	Switzerland
Falkland Islands	Gibraltar	Liechtenstein	Portugal	U.K.
Faroe Islands	Greece	Lithuania	St. Pierre & Miquellan	Vatican City

Country (1) Reporting To APHIS Only Heat Treatment of WPM In Compliance With ISPM 15

Thailand

Other Countries (93) Reporting No Methyl Bromide Usage To UNEP In 2005

Afghanistan	Cape Verde	Haiti	Nauru	Senegal
Albania	Central African Republic	Kazakhstan	Nepal	Serbia
Angola	Chad	Kiribati	Niger	Seychelles
Antigua & Barbuda	Colombia	Kuwait	Niue	Solomon Islands
Azerbaijan	Comoros	Laos	North Korea	Somalia
Bahamas	Congo (both)	Lesotho	Oman	Surinam
Bahrain	Cook Islands	Liberia	Pakistan	Tajikistan
Bangladesh	Cote d'Ivoire	Macedonia	Palau	Tanzania
Barbados	Croatia	Madagascar	Panama	Togo
Belarus	Djibouti	Malawi	Papau-New Guinea	Tonga
Belize	Dominica	Maldive Islands	Peru	Turkmenistan
Benin	Ecuador	Mali	Qatar	Tuvalu
Bhutan	Gabon	Marshall Islands	Russia	UAR
Bolivia	Gambia	Mauritania	Rwanda	Ukraine
Brunei	Ghana	Mauritius	Saint Lucia	Uzbekistan
Bulgaria	Grenada	Moldova	Saint Vincent/Grenadines	Vanuatu
Burkina Faso	Guinea	Mongolia	Samoa	Venezuela
Burundi	Guinea-Bissau	Myanmar	Sao Tome & Principe	
Cambodia	Guyana	Namibia	Saudi Arabia	

Countries (86) Reporting Use of Methyl Bromide Fumigation In Compliance With ISPM 15/APHIS Regulations Or Neither Reporting Heat Treatment Nor Fumigation (20.6% of U.S. Customs entries in 2005)

Countries (22) Providing APHIS Some Data About Fumigating WPM With Methyl Bromide To Comply With ISPM 15/APHIS Regulations (17% of U.S. Customs Entries In 2005)

Argentina	Costa Rica	Indonesia	Nicaragua	Uruguay
Armenia	Dominican Republic	Japan	Paraguay	Vietnam
Australia	El Salvador	Korea	Philippines	
Brazil	Guatemala	Malaysia	Singapore	
Chile	Honduras	New Zealand	Taiwan	

Other Countries (65) Lacking Compliance Data And Assumed To Fumigate WPM To Comply With ISPM 15/APHIS Regulations (3.6% of U.S. Customs entries in 2005)

Algeria	East Timor	Israel	Nigeria	Tokelau Island
Anguilla	Egypt	Jamaica	Norfolk Island	Trinidad & Tobago
Aruba	Equatorial Guinea	Jordan	Pitcairn Island	Tunisia
Bermuda	Eritrea	Kenya	Reunion	Turkey
Bosnia-Herzegovina	Ethiopia	Kyrgystan	Romania	Turks & Caicos Islands
Botswana	Fiji	Lebanon	St. Helena	Uganda
British Indian Ocean Territories	Gabon	Libya	St. Kitts-Nevis	United Arab Emirate
British Virgin Islands	Gaza Strip	Macao	Sierra Leone	Wallis & Futuna
Cameroon	Georgia	Montserrat	South Africa	West Bank
Cayman Islands	Heard & McDonald Islands	Morocco	Sri Lanka	Yemen
Christmas Island	India	Mozambique	Sudan	Yugoslavia
Cocos Island	Iran	Netherlands Antilles	Swaziland	Zambia
Cuba	Iraq	New Caledonia	Syria	Zimbabwe

Countries (4 and U.S.) analyzed as part of Cumulative Analysis of WPM Rule (58.8% of U.S. Customs entries in 2005)

Countries (3) That Use Methyl Bromide To Treat WPM For ISPM 15 Compliance (not APHIS regulations) For Which Basic Responses To The Data Request Were Received (38.8% of U.S. Customs Entries In 2005 And U.S. Reported Usage)
Canada
Mexico
U.S.A.

Countries (2) Whose National Plant Protection Organizations Were Unable To Respond To Request For How Compliance With ISPM 15/APHIS Regulations Is Achieved And Whose WPM Was Already Subject To APHIS Regulation (20% of U.S. Customs Entries In 2005)
China
Hong Kong

Appendix F. Distribution List

Hesham A. Abuelnaga
USDA, APHIS, PPQ, QPAS
4700 River Rd. Unit 60
Riverdale, MD 20737

Ken Alex
Supervising Deputy Attorney General
California Attorney General's Office
1515 Clay St., P.O. Box 70550
Oakland, CA 94612–0550

Ann Alexander
Assistant Attorney General and
Environmental Counsel
Illinois Attorney General's Office
188 West Randolph Street, Suite 2001
Chicago, IL 60601

Dr. Douglas Allen
One Forestry Dr.
College of Environmental Science
& Forestry
State University of New York
Syracuse, NY 13210–2778

Dr. Eric Allen
Natural Resources Canada
Canadian Forest Service
Pacific Forestry Centre
506 West Burnside Rd.
Victoria, BC V8Z 1M5
CANADA

American Nursery and Landscape Assn.
1000 Vermont Ave., NW. Suite 300
Washington, DC 20005

Allan Auclair
USDA, APHIS, PPQ, CPHST
4700 River Rd. Unit 133
Riverdale, MD 20737

Wendy Baer, Executive Vice President
The International Wood Products Assn.
4214 King St., West
Alexandria, VA 22302

Al Barak
USDA, APHIS, PPQ
Pest Survey Detection & Exclusion Lab
Building 1398
Otis ANGB, MA 02542

Dr. Edward L. Barnard
Florida Division of Forestry
1911 SW 34th St.
Gainesville, FL 32614–7100

Peter Barnes
Ministry of Forestry
23 Quay St. CPO Box 39
Auckland, New Zealand

Ann M. Bartuska, Ph.D.
Executive Dir., Invasive Species Initiative
The Nature Conservancy
International Headquarters
4245 North Fairfax Dr. Suite 100
Arlington, VA 22203–1606

Philip Batchelder, Program Coordinator
San Bruno Mountain Watch
P.O. Box 53
Brisbane, CA 94005

Dinah Bear
General Counsel
Council on Environmental Quality
722 Jackson Pl., NW.
Washington, DC 20503

Dr. Dale R. Bergdahl
School of Natural Resources
Department of Forestry
George D. Aiken Center
University of Vermont
Burlington, VT 05405–0088

Dr. Alan Berryman
Washington State University
Department of Entomology
Pullman, WA 99164

Dr. Ronald F. Billings
Forest Pest Management
Texas Forest Service
P.O. Box 310
2127 South First
Lufkin, TX 75902–0310

Dr. George M. Blakeslee
School of Forest Resources & Conservation
P.O. Box 110410
212 Newins–Ziegler Hall
University of Florida
Gainesville, FL 32611–0410

Dr. Robert I. Bolla, Dean
College of Arts and Sciences
Youngstown State University
One University Plaza
Youngstown, OH 44555

The Honorable Barbara Boxer
U.S. Senate
Washington, DC 20520

George Y. Bramwell, Esq., President
Serpentine Art & Nature Commons, Inc.
P.O. Box 040252 Stapleton Station
Staten Island, NY 10304–0005

Suzanne Bratis
OAR, OAP, GPD
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW.
MC: 6205J
Washington, DC 20460

Chaille Brindley
Pallet Enterprise
Industrial Reporting, Inc.
10244 Timber Ridge Dr.
Ashland, VA 23005

Bob Brister
1102 South 800 East #A
Salt Lake City, UT 84105

Robert Scott Brundage
Toledo Urban Orchards
2612 Maplewood Ave.
Toledo, OH 43610

Kimberly Ann Buckley
3705 Fieldstone Blvd. Apt. 403
Naples, FL 34109

Dr. Harold Burdsall, Jr.
USDA, Forest Service
Forest Products Laboratory
1 Gifford Pinchot Dr.
Madison, WI 53705–2398

Wayne Burnett
Senior Import Specialist
USDA, APHIS, EDP
4700 River Rd. Unit 137
Riverdale, MD 20737–1236

Beth Burrows, President/Director
The Edmonds Institute
20319 92nd Ave. West
Edmonds, WA 98020

Bill Callison, Assistant Director
Plant Health & Pest Prevention Services
California Dept. of Food & Agriculture
1220 N St.
Sacramento, CA 95814

Dr. E. Alan Cameron
Professor Emeritus of Entomology
541 McCormick Ave.
State College, PA 16801–6616

Scott Cameron
CHEP Equipment Pooling Systems
2121 K St., NW. Suite 800
Washington, DC 20037

Faith Thompson Campbell
The Nature Conservancy
4245 North Fairfax Drive
Arlington, VA 22203

Hugh M. Carola, Land Trust Director
The Fyke Nature Association
P.O. Box 141
Ramsey, NJ 07446

Joe Cavey
USDA, APHIS, PPQ, PSPI
4700 River Rd. Unit 52
Riverdale, MD 20737

Colby Chester
117 East Louisa St. #400
Seattle, WA 98102

Teung Chin
USDA, OPMP
4700 River Rd. Unit 152
Riverdale, MD 20737

Donald B. Clark
United Church of Christ
Network for Environmental and
Economic Responsibility
P.O. Box 220
Pleasant Hill, TN 38578

The Honorable Hillary Rodham Clinton
U.S. Senate
Washington, DC 20520

Dr. Fields W. Cobb, Jr.
Prof. Emeritus of Forest Pathology
4429 Lakeshore Dr.
Sagle, ID 83860–8721

Bruce E. Coblentz
Department of Fisheries and Wildlife
Nash 104
Oregon State University
Corvallis, OR 97331–3803

Jeff Cohen
U.S. Environmental Protection Agency
Ariel Rios Bldg. 6205J
1200 Pennsylvania Ave., NW.
Washington, DC 20460

Michael Cole
Australian Quarantine & Inspection Service
Edmund Barton Bldg., GPO Box 858
Canberra ACT 2601, Australia

Timothy J. Coleman, Executive Director
Kettle Range Conservation Group
P.O. Box 150
Republic, WA 99166

Nick Collett
Center for Forest Tree Technology
123 Brown St. P.O. Box 137
Heidelberg, Victoria 3084
Australia

Robert C. Conger
8 Stuart Circle
Weldon, NC 27890

Lesley A. Cree
Plant Health Risk Assessment Unit
Animal and Plant Health Directorate
3851 Fallowfield Rd.
Nepean, ON K2H 8P9
CANADA

Gene Cross
Plant Industry Division
North Carolina Department of Agriculture
216 West Jones St.
Raleigh, NC 27603

Marie A. Curtis, Executive Director
New Jersey Environmental Lobby
204 West State St.
Trenton, NJ 08608

Dr. Donald L. Dahlsten
Center for Biological Control
University of California–Berkeley
201 Wellman Hall
Berkeley, CA 94720–3112

Dr. Julian E. Davies, Professor Emeritus
President, American Society for Microbiology
Department of Microbiology & Immunology
University of British Columbia
Vancouver, BC V6T 1Z4
CANADA

Marcel Dawson
Chair, NAPPO Forestry Panel
Plant Health & Production Division
Canadian Food Inspection Agency
59 Camelot Dr.
Nepean, ON K1A 0Y9
CANADA

Dr. Gregg DeNitto
USDA, Forest Service
Missoula Field Office, FHP
Pattee and Pine
Missoula, MT 59807
Edgar Deomano
National Wooden Pallet & Container Assoc.
329 South Patrick St.
Alexandria, VA 22314

Bill Dickerson, Director
Plant Industry Division
North Carolina Dept. of Agriculture
216 West Jones St.
Raleigh, NC 27603

Willard Dickerson
North Carolina Department of Agriculture & Consumer Services
P.O. Box 27647
Raleigh, NC 27611

Anne Divjak
Manager, International Trade
Wood Products International
American Forest & Paper Association
1111 19th St., NW. Suite 800
Washington, DC 20036

David D. Doniger
Policy Director, Climate Center
Natural Resources Defense Council
1200 New York Ave., NW. Suite 400
Washington, DC 20005

William E. Dornbos
Assistant Attorney General
Environmental Protection Bureau
New York Attorney General's Office
120 Broadway, 26th Floor
New York, NY 10271

Jason Van Driesche
2104 Oakridge Ave.
Madison, WI 53704

Richard L. Dunkle, Deputy Administrator
USDA, APHIS, PPQ
Jamie Whitten Bldg., Room 302–E
14th & Independence Ave., SW.
Washington, DC 20250

Dr. L. David Dwinell
USDA, Forest Service
Forestry Sciences Lab
320 Green St.
Athens, GA 30602–2044

Hilarie Engle
Conservation Associate
Committee for Idaho's High Desert
P.O. Box 2863
Bosie, ID 83701

Hugh Evans
The Forestry Authority
Alice Holt Lodge
Wrecclesham, Farnham, Surrey
GU10 4LH
United Kingdom

Charles Croswaithe Eyre
Eyre Associates
The Old Malthouse
Upper Clatford, Andover
Hampshire SP11 7QL
United Kingdom

Bob Faller
Packaging Unlimited
1729 McCloskey Ave.
Louisville, KY 40210

Carol Feinberg-McBrian
1875 West 15th Ave.
Eugene, OR 97402

The Honorable Dianne Feinstein
U.S. Senate
Washington, DC 20520

Robert Fener
1011 Swapping Camp Rd.
Amherst, VA 24521

Dr. Gregory M. Filip
Department of Forest Science
Oregon State University
Forestry Sciences Lab 020
Corvallis, OR 97331–7501

Robert Floyd
CSIRO Australia
Division of Entomology
GPO Box 1700
Canberra ACT 2601, Australia

Dr. Jerry F. Franklin
Professor of Ecosystem Science
University of Washington
2120 Squak Mountain Loop, SW.
Issaquah, WA 98027

Dr. Stewart H. Gage
Department of Entomology
Michigan State University
East Lansing, MI 48824

Dr. Robert I. Gara
University of Washington
College of Forest Resources
AR–10
Seattle, WA 98195

Dr. Donald E. Gardner
Department of Botany
University of Hawaii
3190 Maile Way
Honolulu, HI 96822

Cusi Gibbons-Ballew
12667 North Peach Ridge Rd.
Athens, OH 45701

Christopher Gillis, Deputy Editor
Howard Publications, Inc.
National Press Building, Room 1269
Washington, DC 20045

Dr. Ken Glassey
Ministry of Agriculture & Forestry
Regulatory Authority
ASB Bank House
101–103 The Terrace
P.O. Box 2526
Wellington, New Zealand

Sue Golabek
USDA, Office of General Counsel
Regulatory Division Room 2319
1400 Independence Ave., SW.
Washington, DC 20250

Gordon Gordh, Director
USDA, APHIS, PPQ, CPHST
1017 Main Campus Dr. Suite 2500
Raleigh, NC 27606

Dr. Kenneth Grace
Department of Entomology
University of Hawaii
3050 Maile Way Room 310
Honolulu, HI 96822–2271

Gerald Gray, Chair
Virginia Forest Watch
P.O. Box 929
Clintwood, VA 24228

John Greifer
USDA, APHIS, Trade Support Team
Room 1132, South Bldg.
12th & Independence Ave., SW.
Washington, DC 20250

Dr. John Griesbach
Oregon Department of Agriculture
Plant Division
635 Capitol St., NE.
Salem, OR 97310

Katherine Groves, Staff Ecologist
Georgia Forestwatch
125 Wilcox St. #1
Athens, GA 30605

Dr. Robert Haack
USDA, Forest Service
North Central Research Station
1407 South Harrison Rd.
Room 220 Nisbet
Michigan State University
East Lansing, MI 48823

Dr. Everett M. Hansen
Department of Botany and Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331–2902

Paul W. Hansen, Executive Director
Izaak Walton League of America
707 Conservation Lane
Gaithersburg, MD 20878

Bruce Harpham, Conservation Chair
Rainier Audubon Society
4325 South 343rd St.
Auburn, WA 98001–9533

Dr. Thomas C. Harrington
Plant Pathology Department
Iowa State University
Ames, IA 50011

Dr. Dennis Haugen
USDA, Forest Service
Forest Health Protection
1992 Folwell Ave.
St. Paul, MN 55108

Dr. Michael Haverty
USDA, Forest Service
Pacific Southwest Research Station
800 Buchanan St., West Building
Albany, CA 94710–0011

Ken Havran
Ofc. of Environmental Policy & Compliance
U.S. Department of the Interior
1849 C Street, NW. MS–2342
Washington, DC 20240

Headwaters
Derek Volkart
P.O. Box 729
Ashland, OR 97520

John Healy
360 Solutions Group
2931 Ordway St., NW.
Washington, DC 20008

Doug Heiken
Oregon Natural Resources Council
P.O. Box 11648
Eugene, OR 97440

John Heissenbuttel
Vice President, Forestry and Wood Products
American Forest & Paper Association
1111 19th St., NW. Suite 800
Washington, DC 20036

Dhol Herzi
Room 3871, South Bldg. Mail Stop 0315
1400 Independence Ave., SW.
Washington, DC 20250–0315

Michael Hicks
Coordinator, Trade Policy
Forest and Fishery Products Division
Foreign Agricultural Service
1400 Independence Ave.
Washington, DC 20250–1047

Kenneth R. Hobson, Ph. D.
2114 Wilkinson Court
Norman, OK 73069

Dr. Charles Hodges
2012 Nancy Ann Dr.
Raleigh, NC 27607

Tom Hofacker
USDA, Forest Service
FHP, YB–2S
14th & Independence Ave., SW.
Washington, DC 20250

Jane Hogan
Ontario Hardwood Company, Inc.
190 West Ontario Rd.
Keysville, VA 23947

Paul Houghland, Jr., CAE
Executive Manager
National Hardwood Lumber Association
P.O. Box 34518
Memphis, TN 38184–0518

Cindy Howard
USDA, APHIS, PPD, RAD
4700 River Rd. Unit 118
Riverdale, MD 20737

Martin Hugh-Jones
Dept. of Pathobiological Sciences
School of Veterinary Medicine
Louisiana State University
Baton Rouge, LA 70803–8404

Robert M. Hughes
Regional Aquatic Ecologist
2895 SE. Glenn
Corvallis, OR 97333

Dr. Lee M. Humble
Forestry Canada
Pacific Forestry Centre
506 West Burnside Rd.
Victoria, BC V8Z 1M5
CANADA

Dr. Richard S. Hunt
Pacific Forestry Centre
506 West Burnside Rd.
Victoria, BC V8Z1M5
CANADA

Lee Soo Hura
Korean Embassy
2450 Massachusetts Ave., NW.
Washington, DC 20008

Barbara L. Illman, Research Project Leader
Biodeterioration of Wood
USDA, Forest Service, Forest Products Lab
One Gifford Pinchot Dr.
Madison, WI 53705

Dr. William Jacobi
Dept. of Bioagricultural Sci. & Pest Mgmt.
Colorado State University
Fort Collins, CO 80523

The Honorable James Jeffords
U.S. Senate
Washington, DC 20510

Peter T. Jenkins, Attorney/Policy Analyst
Center for Food Safety
International Center for Tech. Assessment
660 Pennsylvania Ave., SE. Suite 302
Washington, DC 20003

Dr. Allen L. Jennings, Director
Room 3871, South Bldg. Mail Stop 0315
1400 Independence Ave., SW.
Washington, DC 20250–0315

Dr. Kathleen J.R. Johnson
Oregon Department of Agriculture
635 Capitol St., NE.
Salem, OR 97310–0110

William Jones
USDA, Forest Service
180 Canfield St.
Morgantown, WV 26505

Richard Kelly
USDA, APHIS, PPD, 2W92
2150 Centre Ave., Building B
Fort Collins, CO 80526–8117

Narcy Klag
USDA, APHIS, PPQ, PIM
4700 River Rd. Unit 140
Riverdale, MD 20737

Dr. John Kliejunas
USDA, Forest Service
1323 Club Dr.
Vallejo, CA 94592

Dr. Linda Kohn
President, Mycological Society of America
Department of Botany
University of Toronto
Erindale Campus
Mississauga, ON L5L 1C6
CANADA

Dr. Daniel Kucera
337 Staghorn Way
West Chester, PA 19380

Dr. George Kuhlman
145 Orchard Circle
Athens, GA 30605

James LaBonte
Oregon Department of Agriculture
635 Capitol St., NE.
Salem, OR 97301–4550

Dorothy Laidlaw
Canadian Food Inspection Agency
59 Camelot Drive
Nepean, ON K1A 0Y9
CANADA

Thomas Land
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW. 6205–J
Washington, DC 20460

Dr. John D. Lattin
Department of Entomology
Oregon State University
Corvallis, OR 97331–2907

Jack Leishman
Southern Oregon Nature Excursions
2320 Talent Ave.
Talent, OR 97540

The Honorable Patrick Leahy
U.S. Senate
Washington, DC 20510

Dr. Michael Lenz
Division of Entomology, CSIRO
GPO Box 1700
Canberra ACT 2601, Australia

The Honorable Carl Levin
U.S. Senate
Washington, DC 20520

Matthew Levine
Assistant Attorney General
Connecticut Attorney General's Office
P.O. Box 120
55 Elm Street
Hartford, CT 06141-0120

Jane Levy
USDA, APHIS, PPQ, PHP
4700 River Rd. Unit 131
Riverdale, MD 20737

Mike Lidsky
USDA, APHIS, PPQ, PHP
4700 River Rd. Unit 141
Riverdale, MD 20737

Dr. Marc J. Linit
Department of Entomology
1–87 Agriculture Bldg.
University of Missouri–Columbia
Columbia, MO 65211

Dr. Willis Littke
Weyerhaeuser Research Station
505 North Pearl St.
Centralia, WA 98531

Kelly Lobdell
Package Research Lab
41 Pine St.
Rockaway, NJ 07843

Rev. Charles Lord
Obed Watershed Association
P.O. Box 464
Pleasant Hill, TN 38578

Dr. Ann M. Lynch, Chair
SAF Forest Entomology and Pathology
Working Group
Southwest Forest Science Complex
USDA, Forest Service
2500 South Pine Knoll Dr.
Flagstaff, AZ 86001–6381

Magic
381 Oxford Ave.
Palo Alto, CA 94306

Michelle Marcotte
31 Shadetree Crescent
Ottawa, ON K2E 7R3
CANADA

Vic Mastro, Laboratory Director
USDA, APHIS, PPQ
Pest Survey Detection & Exclusion Lab
Building 1398
Otis ANGB, MA 02542

Dr. William Mattson
USDA, Forest Service
North Central Research Station
5985 Highway K
Rhinelander, WI 54501

Dr. Glynn Maynard
Australian Quarantine & Inspection Service
Plant Quarantine Policy Branch
Edmund Barton Bldg., Barton ACT
GPO Box 858
Canberra ACT 2601, Australia

Ian McDonell
Executive Director, NAPPO
Observatory Crescent, Bldg. 3
Central Experiment Farm
Ottawa, ON K1A 0C6
CANADA

Vince Meleski
Program Director, Wild Alabama
P.O. Box 117
Moulton, AL 35650

Dr. Leigh Miller
Division of Entomology, CSIRO
GPO Box 1700
Canberra ACT 2601, Australia

Craig Minowa, Technical Director
Environmental Assoc. for Great Lakes Educ.
394 Lake Ave. South, Suite 222
Duluth, MN 55802

Emmanuel Mireku
Australian Quarantine & Inspection Service
Plant Quarantine Policy Branch
Edmund Barton Bldg., Barton ACT
GPO Box 858
Canberra, ACT 2601, Australia

Grace Muscarella
AWARE, Montgomery County, PA
501 Hancock Rd.
North Wales, PA 19454

Frank Neff
14035 West 91st Terr. #3
Lenexa, KS 66215–3293

Mark Newcombe
Natural Resources Canada
Canadian Forest Service
580 Booth St.
Ottawa, ON K1A 0E4
CANADA

John Neylan
1220 Pennsylvania Ave., NW. 2225–A
Washington, DC 20460

Dr. David Nowak
USDA, Forest Service
Northeastern Research Station
5 Moon Library, SUNY–CESF
Syracuse, NY 13210

Dr. Joseph O'Brien
USDA, Forest Service
Forest Health Protection
1992 Folwell Ave.
St. Paul, MN 55108

Andrei Orlinski
European & Mediterranean Plant
Protection Organization
1, rue Le Nôtre
75016 Paris, France

Nancy K. Osterbauer, Ph. D.
Oregon Department of Agriculture
635 Capitol St., NE.
Salem, OR 97301–4550

Nils Osterberg
30 Chatterton Ave.
White Plains, NY 10606

William J. Otrosina
Chair, APS Forest Pathology Committee
USDA, Forest Service
320 Green St.
Athens, GA 30602–2044

David L. Overhaulser
Forest Health Management
Oregon Department of Forestry
2600 State St.
Salem, OR 97310

Dr. Don Owen
California Department of Forestry
6105 Airport Rd.
Redding, CA 96002

Richard Owen
Smurfit-Stone Container Corporation
2940 Reach Rd. P.O. Box 3097
Williamsport, PA 17701

Parul R. Patel
USDA, APHIS, PPQ, EDP
4700 River Rd. Unit 137
Riverdale, MD 20737

John H. Payne
USDA, APHIS, PPQ, ODA
Jamie Whitten Bldg., Room 302–E
14th & Independence Ave., SW.
Washington, DC 20250

Dr. Thomas Payne
OSU/OARDC
Director's Office
1680 Madison Ave.
Wooster, OH 44691

Paul Pheloung
Manager, Weeds & Forestry Team
Australian Quarantine & Inspection Service
Edmund Barton Bldg., GPO 858
Canberra ACT 2601, Australia

David Porter
Councilor, Ecology/Pathology
Mycological Society of America
Botany Department
University of Georgia
Athens, GA 30602

Mark Powell
USDA, ORACBA
1400 Independence Ave., SW.
Rm. 5248 S, Stop 3811
Washington, DC 20250–3811

Scot Quaranda, Organizing Director
Dogwood Alliance
P.O. Box 7645
Asheville, NC 28802

Dr. Sharron Quisenberry
Office of the Dean & Director
Montana State University
202 Linfield
P.O. Box 172860
Bozeman, MT 58717–2860

Jonathan B. Ratner
Bradford Environmental Research Institute
P.O. Box 1277
Pinedale, WY 82941

Brian Read
Senior Manager, Scientific Services
Australian Quarantine & Inspection Service
Edmund Baron Bldg., GPO 858
Canberra ACT 2601, Australia

Lisa Rehms
Oregon Department of Agriculture
635 Capitol St., NE.
Salem, OR 97301–4550

Sarah Reichard, Ph.D.
Center for Urban Horticulture
3501 NE. 41st Street
Seattle, WA 98195–4115

Jim Reynolds, Regional Director
USDA, APHIS, PPQ
Western Regional Office
1629 Blue Spruce Dr. Suite 204
Ft. Collins, CO 80524

Ann F. Rhoads, Ph.D.
Senior Botanist, Pennsylvania Flora Project
Morris Arboretum of the University of PA
9414 Meadowbrook Ave.
Philadelphia, PA 19118

Dana L. Richter, Ph.D.
Research Scientist II
Pathology/Mycology
Forest Resources & Environmental Science
Michigan Technological University
1400 Townsend Dr.
Houghton, MI 49931–1295

Dr. David M. Rizzo
Department of Plant Pathology
University of California–Davis
Davis, CA 95616

William Roberts
Asst. Director, Plant Quarantine Branch
Australian Quarantine & Inspection Service
Edmund Barton Bldg., GPO 858
Canberra ACT 2601, Australia

Dave Robinson
Concerned Friends of Ferry County
P.O. Box 151
Curlew, WA 99118–0151

Dr. Matt Royer
USDA, APHIS, PPQ, EDP
4700 River Rd. Unit 26
Riverdale, MD 20737–1236
Fernando Pena Royo

Servicio Agricola y Ganadero
Departmento Proteccion Agricola
Avenida Bulnes 140
Santiago, Chile

Leslie G. Rubin
USDA, APHIS, PPQ, PARC
4700 River Rd. Unit 141
Riverdale, MD 20737

Sr. Gustavo Hernandez Sanchez
Subdireccion de Sanidad Forestal
SEMARNAP
Av. Progreso No.5 Col. del Carmen
Coyoacan, 04110 MEXICO, D.F.

Robert T. Sanders, Chairman
EIPS Task Group & IBM Corporate
Packaging Program Manager
3039 Cornwallis Rd. Mail Stop GQB/205
Research Triangle Park, NC 27709–2195

Dr. Rob Schaeffer
SAFE: Save Our Ancient Forest Ecology
225 West Granger Ave.
Modesto, CA 95350

Jim Schaub, Acting Director
USDA, ORACBA
Room 5248, Mail Stop 3811
1400 Independence Ave., SW.
Washington, DC 20520

Dr. Rudolf Scheffrahn
Ft. Lauderdale Res. & Education Ctr.
3205 College Ave.
Ft. Lauderdale, FL 33314–7799

Professor Scott E. Schlarbaum
Dept. of Forestry, Wildlife & Fisheries
University of Tennessee
Knoxville, TN 37996

Bruce Scholnick
National Wooden Pallet & Container Assoc.
329 South Patrick St.
Alexandria, VA 22314–3501

Dr. A. Alan Schreiber
Chair, ESA Section E
Washington State University
100 Sprout Rd.
Richland, WA 99352

The Honorable Charles Schumer
U.S. Senate
Washington, DC 20520

Tom Searle
ACSC
P.O. Box 210
Germantown, MD 20875

Shane Sela
Natural Resources Canada
Canadian Forest Service
Pacific Forestry Centre
506 West Burnside Rd.
Victoria, BC V8Z 1M5
CANADA

Ron A. Sequeira
USDA, APHIS, PPQ, CPHST
1017 Main Campus Dr., Suite 2500
Raleigh, NC 27602–5202

Dr. Stephen J. Seybold
Department of Entomology
University of Minnesota
219 Hodson Hall
1980 Folwell Ave.
St. Paul, MN 55108

Garth Sherman
3M Package Engineering
International Regulatory Center
Building 216–2N–08
St. Paul, MN 55144–1000

Dave Shriner
USDA, Forest Service
North Central Research Station
1992 Folwell Ave.
St. Paul, MN 55108

Harith Siddik
Dedutaan Besar Malaysia
Embassy of Malaysia
3516 International Ct., NW.
Washington, DC 20008

Yudi Singh, A/Director
Plant Health & Production Division
Forestry Section
Canadian Food Inspection Agency
59 Camelot Dr.
Ottawa, ON K1A 0Y9
CANADA

Dr. Steve Slack, President
American Phytopathological Society
Ohio State University
OARDC
1680 Madison Ave.
Wooster, OH 44691

Stephen Slater
1414 East 25th Ave.
Eugene, OR 97403

Francis D. and Barbara A. Slider
Rt. 1 Box 163-A2
Middlebourne, WV 26149

Burleson Smith
USDA, NRCS
1400 Independence Ave., SW.
5118 South Building
Washington, DC 20250

Dennis Souto
USDA, Forest Service
271 Mast Rd., P.O. Box 640
Durham, NH 03824

John Stahura
Board Member, PWRP
Senior Associate Professor, Biology
Manor College
700 Fox Chase Rd.
Jenkintown, PA 19046

Prof. Glen R. Stanosz
Department of Plant Pathology
University of Wisconsin–Madison
1630 Linden Dr.
Madison, WI 53706

Rev. Walter Stark
Cumberland Countians for Peace & Justice
P.O. Box 154
Pleasant Hill, TN 38578

Kent Stromsmoe
Forestry Monitoring Project
2215 Pine St.
Martinez, CA 94553–2727

Prof. Jeffery Stone
Oregon State University
Department of Botany & Plant Pathology
Cordley 2082
Corvallis, OR 97331–2902

Dr. Nan–Yao Su
Ft. Lauderdale Res. & Education Ctr.
3205 College Ave.
Ft. Lauderdale, FL 33314

Theresa Sinicrope Talley
Doctoral Candidate in Ecology
1313 Wake Forest Dr. #116
Davis, CA 95616

Ofc. of Environmental Policy & Compliance
U.S. Department of the Interior
1849 C Street, NW.
Washington, DC 20240

Dr. Borys Tkacz
USDA, Forest Service
FHP, YB–2S
201 14TH St., SW.
Washington, DC 20250

U.S. Environmental Protection Agency
Office of Federal Activities
Ariel Rios Bldg., Room 7213
1200 Pennsylvania Ave., NW.
Washington, DC 20460

Barbara Ullian, Conservation Director
Siskiyou Project
P.O. Box 1976
Grants Pass, OR 97528

Joseph Vaile, Campaign Coordinator
Klamath-Siskiyou Wildlands Center
P.O. Box 102
Ashland, OR 97520

Dr. Ken Vick
National Program Staff
USDA, ARS
5601 Sunnyside Ave.
Beltsville, MD 20705–5139

Joanne Vinton
805 Berntzen Rd.
Eugene, OR 97402

Trang Vo
USDA, APHIS, PPD, ODA
4700 River Rd. Unit 20
Riverdale, MD 20737

Jim and Virginia Wagner
4897 East Walnut St.
Westerville, OH 43081

Dr. William Wallner
184 Falcon Rd.
Guilford, CT 06437

Dr. Robert Waltz
Div. of Entomology & Plant Pathology
402 W. Washington St., Rm. 290
Indianapolis, IN 46204

Karen Wanamaker
National Wooden Pallet & Container Assoc.
329 South Patrick St.
Alexandria, VA 22314

James A. Ward
111 Twp. Rd. 615
South Point, OH 45680

Dr. Doreen E. Watler
Plant Health Risk Assessment Unit
Animal and Plant Health Director
3851 Fallowfield Rd.
Nepean, ON K2H 8P9
CANADA

Dr. Susan E. Webb
Chair, ESA Section C
Dept. of Entomology & Nematology
P.O. Box 110620
Gainesville, FL 32611–0620

Alan Weiner
7102 Gracely Dr. #1
Cincinnati, OH 45233

Dean Wiegert
3002 South Delaware Ave.
Milwaukee, WI 53207

Chuck Willer, Director
Coast Range Association
P.O. Box 2250
Corvallis, OR 97339

Phyllis Windle, Ph.D.
Union of Concerned Scientists
1707 H Street, NW. Suite 600
Washington, DC 20006–3919

Dr. Michael Wingfield
Faculty of Biological & Agricultural Sci.
University of Pretoria
Pretoria 0002
Republic of South Africa

Pete Witherell
USDA, APHIS, CPHST
901 Hillsboro St.
Oxford, NC 27565

Lyn M. Withey
Vice President Public Affairs
International Paper
1101 Pennsylvania Ave., NW. Suite 200
Washington, DC 20004

Dr. David L. Wood
Professor Emeritus of Entomology
University of California–Berkeley
201 Wellman Hall
Berkeley, CA 94720

Dr. Stephen L. Wood
Life Science Museum
290 MLBM
Brigham Young University
Provo, UT 84602–0200

James Woods
10938 Badger Ct.
Penn Valley, CA 95946

(This page is intentionally left blank.)

Appendix G. References

Beijing Times, 2003. China to ban ozone-harming chemical. Available online at: http://english.people.com.cn/200309/18/eng20030918_124501.shtml.

Biosecurity Australia, 2006. Technical justification for Australia's requirement for wood packaging material to be bark free. Biosecurity Australia, Canberra, Australia. May 2006.

Chen,Y.-C., 2006. Email response to questions regarding Taiwan's implementation of wood packaging material regulations to Jennifer Lemly of APHIS. June 16, 2006.

Cohen, C.T., 2006. Email response to questions regarding Chile's implementation of wood packaging material regulations to Wilmer Snell of APHIS. August 8, 2006.

Deomano, E., 2006a. Personal communication via phone call by David Bergsten with Edgar Deomano, Technical Director, National Wooden Pallet and Container Association regarding fumigation of wood packaging materials for compliance with ISPM 15, June 6, 2006 at 4 P.M.

Deomano, E., 2006b. Personal communication via phone call by David Bergsten with Edgar Deomano, Technical Director, National Wooden Pallet and Container Association regarding amount of re-use of wood packaging materials, June 6, 2006 at 4 P.M.

Dervos, C.T., and Vasiliou, P., 2000. Sulfur hexafluoride (SF6): Global environmental effects and toxic byproduct formation. J. of the Air and Waste Management Assoc. 50:137-141.

EPA, OPP—See U.S. Environmental Protection Agency, Office of Pesticide Programs

FAO—See Food and Agriculture Organization of the United Nations

Food and Agriculture Organization of the United Nations, 2006. Report of the First Session of the Commission on Phytosanitary Measures. Available online at https://www.ippc.int/id/133571. Food and Agriculture Organization of the United Nations, Rome, Italy. April 3-7, 2006.

Franz, C., 2006. Email response to questions regarding Brazil's implementation of wood packaging material regulations to Thereza Barros of APHIS. July 13, 2006.

Hernandez, J., 2006. Email response to questions regarding Nicaragua's implementation of wood packaging material regulations to Marco Gonzalez of APHIS. October 3, 2006.

International Plant Protection Convention, 2006. Proposed revision to Methyl Bromide (MB) fumigation schedule of Annex I of ISPM No. 15 (Guidelines for regulating wood packaging material in international trade.). Available online at: http://www.ippc.int/cds_upload/1118752635162_Proposed_revision_to_MBr_schedule_Annex_I_English.doc.

IPPC Secretariat Plant Protection Convention, Food and Agriculture Organization of the United Nations, 2005. Proposed revision to methyl bromide (MB) fumigation schedule of Annex I of ISPM No. 15 (Guidelines for regulating wood packaging material in international trade). Available online at https://www.ippc.int/cds_upload/1118752635162_**Proposed**_revision_to_MBr_schedule_Annex_I_English.doc. IPPC Secretariat, Food and Agriculture Organization of the United Nations, Rome, Italy. April 29, 2005.

IPPC Secretariat Plant Protection Convention, Food and Agriculture Organization of the United Nations, 2002. International Standards for Phytosanitary Measures. Guidelines for Regulating Wood Packaging Material in International Trade. Publication No. 15, March 2002. Secretariat of the IPPC, FAO of the United Nations, Rome, Italy.

Kani, H., 2006. Email response to questions regarding Japan's implementation of wood packaging material regulations to Wilmer Snell of APHIS. June 19, 2006.

Kim, Y., 2006. Email response to questions regarding Korea's implementation of wood packaging material regulations to Jennifer Lemly of APHIS. June 15, 2006.

Knight, S., 2004. Velco's NRP, substations, sulfur hexafluoride breakers and alternatives. A report to the Public Service Board regarding docket 6860 and to Vermont Air Pollution Control Division. Charlotte, VT. Available online at: http://www.vtce.org/velcoglobalwarming.html.

Mercado, C.C.T., 1999. Phasing out methyl bromide in China: a developing country initiative. Poster presentation by the United Nations Environment Program available online at: http://www.epa.gov/Ozone/mbr/airc/1999/110merca.pdf.

Morales, P., 2006. Email response to questions regarding the Dominican Republic's implementation of wood packaging material regulations to Eloisa Jones of APHIS. August 8, 2006.

National Oceanographic and Atmospheric Administration, National Aeronautics and Space Administration, United Nations Environment Programme, World Meteorological Organization, and European Commission, 2007. Scientific assessment of ozone depletion: 2006. World Meteorological Organization Global Ozone Research and Monitoring Project Report No. 50, Vienna, Austria. Final release: February 2007. Available online at: http://ozone.unep.org/Assessment_Panels/SAP/Scientific_Assessment_2006/index.shtml

National Oceanographic and Atmospheric Administration, National Aeronautics and Space Administration, United Nations Environment Programme, World Meteorological Organization, and European Commission, 1998. Scientific assessment of ozone depletion: 1998 executive summary. World Meteorological Organization Global Ozone Research and Monitoring Project Report No. 44, Vienna, Austria.

NOAA—See National Oceanographic and Atmospheric Administration.

Ramos,A., 2006. Email response to questions regarding Mexico's implementation of wood packaging material regulations to Fan-Li Chou of APHIS. June 15, 2006.

Regulation of the European Parliament and Council—See Regulation (EC) No 2037/2000 of the European Parliament and of the Council

Regulation (EC) No 2037/2000 of the European Parliament and of the Council, 2000. Official Journal of the European Communities. June 29, 2000. Available at http://www.dti.gov.uk/files/file29106.pdf

Thomas,F.A., 2006. Email response to questions regarding Canada's implementation of wood packaging material regulations to Gretchen Rector of APHIS. June 19, 2006.

Unahawutti, U., 2006. Email response to questions regarding Thailand's implementation of wood packaging material regulations to Wilhelmina Santos of APHIS. July 10, 2006.

UNEP—See United Nations Environment Programme.

UNEP, MBTOC—See United Nations Environment Programme, Methyl Bromide Technical Options Committee.

United Nations Environment Programme, 1998. Environmental effects of ozone depletion: 1998 assessment. Nov. 1998.

United Nations Environment Programme, Methyl Bromide Technical Options Committee, 2007. Montreal Protocol on substances that deplete the ozone layer. 2006 assessment. UNEP, Ozone Secretariat, Nairobi, Kenya. March 15, 2007. 453 pp. Available online at: http://ozone.unep.org/Assessment_Panels/TEAP/Reports/MBTOC/index.shtml

United Nations Environment Programme, Methyl Bromide Technical Options Committee, 1998. Assessment of alternatives to methyl bromide. 354 pp.

United Nations Environment Program, 2003. Agreement between China and the Executive Committee for the national methyl bromide phase-out plan. Available online at: http://www.unmfs.org/policy/doc/Policy47p757.htm

USDA, APHIS—See U.S. Department of Agriculture, Animal and Plant Health Inspection Service

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2006a. Not all alien invaders are from outer space: Asian Longhorned Beetle, Anoplophora glabripennis. Available online at http://www.aphis.usda.gov/lpa/pubs/invasive/14albeet.html

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2006b. Emergency and Domestic Programs: Emerald Ash Borer - Background. Available at http://www.aphis.usda.gov/ppq/ep/eab/background.html

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2004. Final regulatory impact analysis of the final rule to adopt the international standard on wood packing material in international trade. Docket No. 02-032-3. Revised September 3, 2004. USDA, APHIS, Policy and Program Development, Policy Analysis and Development, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2003. Importation of solid wood packing material. Final environmental impact statement—August 2003. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2002a. 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. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2002b. Importation of solid wood packing material. Draft environmental impact statement—October 2002. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2002c. Pine Shoot Beetle, June 2002. Available at http://www.aphis.usda.gov/lpa/pubs/fsheet_faq_notice/fs_phpsb.html

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1999. Summary trip report, SWPM China/Hong Kong. October 6, 1999. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1998a. Importation of logs, lumber, and other unmanufactured wood articles. Final supplement to the environmental impact statement, May 1998. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1998b. Proposed interim rule on solid wood packing material from China. Environmental assessment, September 1998. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1998c. Proposed rule for the importation of wood articles from Mexico. Environmental assessment, December 1998. Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1998d. Plant protection and quarantine treatment manual, Interim Edition. PPQ 04/98–01. July 1998. Frederick, MD.

U.S. Environmental Protection Agency, Office of Pesticide Programs, 2005. Methyl bromide critical use exemption-comprehensive sector analysis. U.S. EPA, OPP, Washington, DC.

Appendix H. Acronyms and Glossary

A

ACGIH	American Conference of Governmental Industrial Hygienists
APHIS	Animal and Plant Health Inspection Service, United States Department of Agriculture
ARS	Agricultural Research Service, United States Department of Agriculture

B

Biodiversity	Genetic variability of species and variability of environmental processes within a given geographical area or ecological community.

C

CEC	Commission for Environmental Cooperation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Chlorofluoro-carbons	Organic chemical substances containing chlorine and fluorine.
cm	Centimeters
Controlled atmosphere	Treatment of commodity to asphyxiate (suffocate) parts by displacement of oxygen.
Cumulative impact or effects	". . . the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." (40 CFR 1508.7).

D

Debarking The process of removing bark from logs and other regulated wood articles, including dunnage.

DEIS Draft environmental impact statement

E

EA Environmental assessment

Ecosystem A functioning natural unit including the biological species present, the physical environment (soil, water, air), and relationships among the components present.

EEC European Economic Community

EIS Environmental impact statement

Electron beam irradiation A form of radiation that has experimentally been used to treat wood; the radiation is generated by machine rather than from a radioactive isotope.

Entry The physical arrival of a pest organism at a particular port or location.

EO Executive Order

EPA Environmental Protection Agency

Established A permanent infestation of a pest organism in a given area.

Establishment Perpetuation, for the foreseeable future, of a pest within an area after introduction.

EU European Union

F

FAO Food and Agriculture Organization, United Nations

FEIS Final environmental impact statement

Frass Excretory products from insects.

FS USDA, Forest Service

Fumigant The gaseous state of a toxic chemical which, when released and dispersed to a commodity, is designed to kill any pests found on or within the commodity.

Fumigation The act of releasing or dispersing a gaseous or aerosol compound (fumigant) to eliminate pest risk.

Fumigation chamber Enclosed structure where commodities are treated with gaseous or aerosol compound to eliminate pest risk.

G

Gamma irradiation A nonchemical treatment method that has been used to sterilize or kill certain pest species by exposure to specific wavelengths of light rays and is a method that is most often used to treat commodities other than wood.

GATT General Agreement on Trade and Tariffs; an international agreement designed to reduce and eliminate barriers to trade, investment, and services among its signatory countries.

Global warming/global climate change The process by which energy distribution within the atmosphere affects temperature and climate worldwide.

Grams per cubic meter (g/m^3) Measurement of fumigant concentration in air.

Gray In irradiation treatments, an amount of energy (1 joule or 1,000 ergs) absorbed from a radiation-producing source per kilogram of matter; 1 Gray equals 100 rads.

Greenhouse gases/effect Any one of several chemicals present in air that store and retain heat and may cause warming of air temperatures (effect).

H

Harmonization Process of making Federal regulations consistent and compatible with other Federal regulations, International treaties and agreements, and related trade initiatives.

Heat treatment Regulatory quarantine action of applying high temperature to a commodity to eliminate pest risk.

Hectare Unit of area measure equal to 2.471 acres.

I

Introduction The intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity.

IPM Integrated Pest Management; an approach to pest control that involves consideration to all practical chemical and nonchemical methods.

IPPC International Plant Protection Convention

Irradiation Regulatory treatment which exposes a commodity to light rays resulting in elimination of pest risk.

ISPM International Standards for Phytosanitary Measures

ITO International Trade Organization

K

Kiln drying A process in which wood is dried in a closed chamber using heat and/or humidity control to achieve a required moisture content.

M

m^3 Cubic meters

MBTOC Methyl Bromide Technical Options Committee

Mercosur (Mercado Comun del Sur): Southern Common Market Regional Trade Agreement (RTA) between Brazil, Argentina, Uruguay, and Paraguay, founded in 1991 by the Treaty of Asunción, which was later amended and updated by the 1994 Treaty of Ouro Preto.

Microwave treatment Exposing wood to ultra-high frequency magnetic fields that elevate the temperature of any material containing moisture.

Mitigation Measures taken to avoid or reduce adverse impacts on the environment; or measures taken to avoid or reduce the likelihood of pest presence or survival in a commodity.

MT	Metric tons
	N
NAFTA	North American Free Trade Agreement
NEPA	National Environmental Policy Act
NOEL	No Observed Effect Level; the highest dose level at which there are no observable differences between the test and control populations.
Nonquarantine pest	An undesirable organism not officially controlled but of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed.
NPPO	National Plant Protection Organization; an official service established by a government to discharge the functions specified by the IPPC [FAO, 1990; formerly Plant Protection Organization].
	O
ODP	Ozone depleting potential (under stratospheric ozone layer).
ODS	Ozone depleting substance; literally, a substance which acts to reduce the amount of ozone in the atmosphere.
Ozone	A compound consisting of three connected oxygen atoms found in two layers of the atmosphere, the stratosphere and the troposphere.
	P
Phytosanitary measures	Any legislation, regulation, or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests.
Phytotoxicity	The ability of a chemical to adversely affect plant growth or survival.
Plant pest	"Any living stage of any insects, mites, nematodes, slugs, snails, protozoa, or other invertebrate animals, bacteria, fungi, other parasitic plants or reproductive parts of parasitic plants, noxious weeds, viruses, or any organism similar to or allied with any of the foregoing, or any infectious substances, which can injure or cause disease or damage in any plants, parts of plants, or any products of plants." (7 CFR 319.40–1).
PPM	Parts per million

PPQ Plant Protection and Quarantine, Animal and Plant Health Inspection Service, United States Department of Agriculture

Q

QPS Quarantine and preshipment

Quarantine pest An undesirable organism, officially controlled and of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed.

R

Rad In irradiation treatments, an amount of energy absorbed from a radiation producing source per kilogram of matter; one rad equals 1/100 Gray.

Recapture system The part of fumigation equipment designed to remove methyl bromide when treatment is completed. Equipment consists of an intake from fumigation chamber, an extraction unit, and an outflow for the purified air.

Regeneration facility An industrial plant designed to remove bromine residues from carbon absorption modules to allow future use in recapture systems of methyl bromide.

Regulated article "The following articles, if they are unprocessed or have received only primary processing: logs; lumber; any whole tree; any cut tree or any portion of a tree, not solely consisting of leaves, flowers, fruits, buds, or seeds; bark; cork; laths; hog fuel; sawdust; painted raw wood products; excelsior (wood wool); wood chips; wood mulch; wood shavings; pickets; stakes; shingles; solid wood packing materials; humus; compost; and litter." (7 CFR 319.40–1).

Regulated non-quarantine pest A nonquarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party.

Regulated pest A quarantine pest and/or a regulated nonquarantine pest

RfC Reference concentration

S

SEIS — Supplemental environmental impact statement

Sessile — Animals that are slow moving or sedentary

Solid wood packing material (WPM) — Wood packaging materials other than loose wood packing materials, used or for use with cargo to prevent damage, including, but not limited to, dunnage, crating, pallets, packing blocks, drums, crating, and skids.

SPS — Sanitary and phytosanitary regulations/standards

Stratosphere — The upper portion of the atmosphere, in which temperature varies very little with changing altitude and clouds are rare.

Substitute packing materials — Cargo packing materials other than SWPM, including, but not limited to plywood, oriented strand board, particle board, corrugated paperboard, plastic and resin composites, plastic, and metal.

SWPM — Solid wood packing materials

T

TEIA — Transboundary environmental impact assessments

Trace gas — An aerosol present at low concentration that is barely detectable.

U

UN — United Nations

UNEP — United Nations Environment Programme

USDA — United States Department of Agriculture

UV — Ultraviolet radiation

V

Volatilizer — Heating unit to convert methyl bromide liquid to a gaseous form.

W

WHO	World Health Organization
WMO	World Meteorological Organization
Wood preservative treatment	Application of liquid chemicals by surface coating, dipping, or pressure treatment of wood to prevent or eliminate pest infestation.
Wood packaging material	IPPC term that is interchangeable with APHIS' solid wood packing material (SWPM).
WTO	World Trade Organization

Appendix I. Index

(This page is intentionally left blank.)