

irradiation, and treatment in controlled atmosphere.

The IPPC Guidelines state, with respect to heat treatment, that SWPM should be heated in accordance with a specific time-temperature schedule that achieves a minimum wood core temperature of 56 °C for a minimum of

30 minutes. It notes that kiln-drying, chemical pressure impregnation (CPI), or other treatments may be considered heat treatments to the extent that these meet the heat treatment specifications. For example, CPI may meet the specification through the use of steam, hot water, or dry heat.

The IPPC Guidelines state, with respect to methyl bromide fumigation, that the SWPM should be fumigated in an enclosed area for at least 16 hours at the following dosage, stated in terms of grams of methyl bromide per cubic meter of the enclosure being fumigated:

Temperature	Initial dose (g/m <sup>3</sup> )	Minimum required concentration (g/m <sup>3</sup> ) after:			
		0.5 hrs.	2 hrs.	4 hrs.	16 hrs.
21 °C or above .....	48	36	24	17	14
16 °C or above .....	56	42	28	20	17
11 °C or above .....	64	48	32	22	19

The methyl bromide fumigation schedule in the IPPC Guidelines parallels, though it is not identical to, the schedules APHIS requires for fumigation of SWPM (e.g., for shipments from China). The heat treatment schedule in the IPPC Guidelines has a lesser time-temperature requirement than the existing APHIS heat treatment schedule in § 319.40–7(c), which requires maintaining a core temperature of at least 71.1 °C for a minimum of 75 minutes. However, it is generally acknowledged, and supported by research discussed below, that the APHIS heat treatment schedule in § 319.40–7(c) exceeds the treatment level necessary to control the IPPC target pests in SWPM. The time-temperature combination in § 319.40–7(c) was set to ensure destruction of a wide variety of pests and pathogens, some of which are not target pests for SWPM, in wood articles of a variety of sizes and shapes, some of which, being thicker and larger, require more stringent treatments than does SWPM. It is not certain whether the heat and methyl bromide treatments we are proposing may provide less mitigation of all possible pest risks than the more stringent treatments currently required for SWPM from China. The proposed treatments should be just as effective with regard to the target pests identified in this rule and in the IPPC Guidelines. Approximately 95 percent of pests our inspectors intercept on shipments worldwide are pests on the IPPC target pest list, and research demonstrates the IPPC standard treatments are effective against these pests. For the remaining 5 percent of pests we intercept—primarily defoliators and rarely sapsucking insects, pathogens, or nematodes—limited data supports a conclusion that most are likely to be effectively mitigated by the treatments in the IPPC standard. If there are any remaining pests not effectively mitigated by the IPPC standard treatments, we do not

have conclusive scientific evidence that the treatments currently required for SWPM from China would be more effective against them than the IPPC standard treatments. Such a conclusion would be conjectural, that the additional heat treatment or fumigation would be enough to destroy the pest. Instead of retaining the China treatments merely because they require higher doses that might be effective against pests with unknown tolerances, APHIS intends to develop more information about such pests and address them when we can verify effective treatment. As stated in the IPPC Guidelines, APHIS or other nations' plant protection agencies may promulgate additional rules as needed to address additional pest risks on a case-by-case basis.

In addition to describing heat and methyl bromide treatment schedules and an approved international mark for SWPM, the IPPC Guidelines require that a country's national plant protection organization develop procedures to ensure that SWPM treated and marked in that country for export complies with the IPPC Guidelines. Countries must monitor the SWPM certification and marking systems that verify compliance and must establish procedures to inspect, register or accredit, and audit commercial companies that apply the SWPM treatments.

*Risks to U.S. Resources, Recent Pest Interceptions, and Other Data Supporting Adoption of the IPPC Guidelines*

There is worldwide consensus among national plant protection organizations that pest interceptions associated with SWPM indicate a serious problem in which the movement of certain dangerous pests is not sufficiently controlled by current restrictions on SWPM. There is ample data indicating that the United States is at particular risk with regard to this problem. For

many years, pests associated with SWPM, including highly destructive wood borers and beetles, have been intercepted at U.S. ports. Pests of these types are often well-concealed inside SWPM, in larval forms or dormant stages that increase their survival potential. These pests may easily survive movement to the final destination or to cargo redistribution sites, many of which are vulnerable, heavily forested regions. About one-third of the land area of the United States is forest land, and there are millions of acres of urban, suburban, and ornamental trees as well. There are many areas where the climate, tree species, and lack of natural predators would allow introduced pests to flourish and become established.

One confirmation of the SWPM pest problem can be seen using an APHIS database, the Port Information Network (PIN–309), which records interceptions of quarantine pests<sup>4</sup> found in cargo arriving at United States ports. These reports of interceptions are based on sampling inspections conducted by APHIS inspectors at U.S. ports. For many years the PIN–309 reports have recorded interceptions in imported SWPM of the types of pests the IPPC Guidelines were developed to control. In recent years PIN–309 data has shown increasing levels of pests of concern, in addition to recording evidence that the treatments contained in the IPPC Guidelines are effective when they are applied.

From 1996 through 1998, PIN–309 reported<sup>5</sup> an average of 402 live pests

<sup>4</sup> “Quarantine pest”: A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled. (FAO, 1990; revised FAO, 1995; IPPC, 1997).

<sup>5</sup> The scope and limits of PIN–309 data suggest that many more pests associated with SWPM went unreported. First, PIN–309 reports are made by inspectors, who inspect less than 1 percent of the more than 4 million wood pallets and other SWPM