packaging for the transportation of liquid hazardous materials. The set of six standards it has offered appear to be identical to the standards proposed by FDTC in its 1992 exemption application and, according to IFDI, "accurately predict, and will continue to accurately predict, the safety of liquid hazardous materials as transported in open-head fibre drums." IFDI referred to "a 30-year record of safe shipping experience," and a safety record that "has continued to remain at 99.99 percent for the past 14year period." It asserted that the ANPRM was deficient for failing to specify factors that, according to IFDI,

Congress directed DOT to consider. These factors are set forth in the legislative history and include: (1) DOT's Hazardous Incident Reporting System as it pertains to fibre drums; (2) the fibre drum industry's own safety record; (3) the 30 years of shipping experience associated with use of these drums and (4) existing industry standards that have led to the industry's ''excellent shipping record.''

IFDI also contended that other matters were "irrelevant" to this rulemaking, including the safety record for other packagings (similar to that for fiber drums), the comparative costs of other packagings, and possible impacts that alternate standards would have on international trade agreements.

Several commenters expressed opposition to alternate standards for fiber drums. The 3M Corporation stated: "The UN performance standards are very basic standards that simulate the transportation environment. There are no other standards that simulate the current transportation environment. DuPont acknowledged that it used a "small amount" of fiber drums for shipping non-hazardous liquids, but that its evaluations have led it to follow a "long-standing practice" of not using fiber drums for hazardous liquids. Elf Atochem stated that "liquid-type fiber drums could not offer the filler, carrier and emptier an 'equal or greater level of safety' to a drum which does pass the required [HM-181] tests.'

SSCI argued that alternate standards would move the United States away from an international system of hazardous materials regulations, forcing some shippers to stock different packagings for domestic and international shipments, and compromise transportation safety by authorizing lower quality packagings. ACR stated that alternate packagings should be approved only under the provisions of 49 CFR 178.601(h), which authorizes RSPA's Associate Administrator for Hazardous Materials Safety to approve packagings which are "shown to be equally effective, and testing methods must be equivalent."

Monsanto Company supported the position that fiber drums should conform to the HM–181 performance standards, but it suggested a limited exception to allow the use of nonstandard fiber drums for the shipment of liquid hazardous wastes in packing groups II and III to incineration facilities, under certain conditions. Monsanto stated that it would not be acceptable "to allow for any other use of fiber drums which do not meet the requirements of performance standards."

Besides opposing the issuance of alternate standards, Russell-Stanley and The Society of the Plastics Institute also stated that if any alternate standards were adopted, they should apply to all open-head drums, including those made from steel and plastic as well as fiber. According to Sirco Systems, Inc., alternate standards would be "a precedent for similar requests by other packaging industries [which] could undermine the entire performanceoriented packaging standards system

E. SANPRM

On January 25, 1995, RSPA published in the Federal Register a supplemental advance notice of proposed rulemaking (SANPRM), Docket No. HM–221; Notice No. 95–2 (60 FR 4879). In the SANPRM, RSPA reopened the comment period and scheduled a public hearing to allow interested parties to submit additional proposals as well as comments with regard to the alternate standards offered by IFDI.

The SANPRM broadly encouraged interested parties to "submit any comments relevant to the direction in Section 122 of the Act." 60 FR 4880. Additional comments were invited on whether the alternate standards proposed by IFDI meet the statutory measure, in light of the prior determination by RSPA (on FDTC's application for an exemption) that similar standards did not provide an equal or greater level of safety than the HM-181 performance standards. RSPA also requested comments on the "factors set forth in the legislative history" of Section 122, as represented by IFDI; whether alternate standards, if adopted, should apply to packagings other than fiber drums; and Monsanto's proposal for a limited exception to allow nonstandard fiber drums to be used for shipping hazardous wastes to incineration facilities.

At a public hearing on February 17, 1995, statements were presented by IFDI, three manufacturers of fiber drums, two shippers of hazardous materials in fiber drums, ACR and SSCI. RSPA also received 13 additional written comments, including five from members of Congress: Sens. Hollings (D-SC) and Thurmond (R-SC) and Reps. Baker (R-CA), Gillmor (R-OH), and Spratt (D-SC). All the statements and comments to the ANPRM and the SANPRM have been carefully considered as discussed below.

II. IFDI's Proposed Alternate Standards

FDTC's June 1992 exemption application and IFDI's comments in this proceeding both state that open-head fiber drums presently being manufactured meet the stacking test set forth in 49 CFR 178.606 and the vibration standard set forth in 49 CFR 178.608. As alternatives to the other three HM–181 performance standards (drop, leakproofness, and hydrostatic pressure tests),

IFDI has proposed a set of six standards entitled as follows:

IFDI Standard 101, Rev. 1—Compatibility Test

IFDI Standard 110, Rev. 1—Joint Integrity Test

IFDI Standard 120, Rev. 1—Leakage Spray Test

IFDI Standard 130, Rev. 1—Weatherproofing Test

IFDI Standard 140, Rev. 1—Fibre Drum Structure

IFDI Standard 150, Rev. 1—Impact Test

IFDI's standard for fiber drum structure (No. 140) specifies the manner and materials for construction of fiber drums, rather than a test of how the drums will perform. It sets forth specifications for the drum heads, joint materials (caulking and gaskets) and sidewall (paperboard caliper, burst strength, and adhesive). This standard requires that the drum manufacturer know the expected use for the drum, as it specifies non-water soluble adhesive only for drums "intended for outdoor or high humidity storage." It also states that a polyethylene, polymer or poly/ foil liner, laminated to the paperboard, "may be used as the interior ply to provide liquid-holding capability and/or improved product protection and drum cleanliness properties.'

IFDI's other five standards represent forms of performance standards; according to IFDI, four of them set forth tests to which samples are subjected during the design phase (before regular production begins), and the fifth (leakage spray, No. 120) is "a production run test on each container." In summary, these five standards consist of:

• Compatibility (No. 101)—The test consists of folding and stapling a 6"