

The standard currently excludes pole trailers, pulpwood trailers, wheels back trailers, and "special purpose vehicles" because attachment of an underride guard to these specific vehicles is either impracticable or unnecessary.<sup>3</sup> For example, in the case of a wheels back trailer, the rear axle is located within 305 mm of the rear extremity of the vehicle. Because the rear wheels are located so close to the rear extremity of the vehicle, they act as an underride guard, making underride virtually impossible.

The RCC horizontal discharge trailers subject to this notice do not fit the current definition of special purpose vehicles, notwithstanding their unique nature and their work-performing equipment, because technically, their work-performing equipment does not move through or reside in the area in which the underride guard would be attached.<sup>4</sup> Accordingly, there is currently no exclusion in FMVSS No. 224 for this type of trailer.

Because of the unique design necessitated by their interactions with the paving machines, a practicable RCC horizontal discharge trailer appears to be ill-suited for a wheels back design. As previously mentioned, an RCC horizontal discharge trailer is designed to extend over a paving machine in order to drop the hot asphalt mix into the hopper. A rear axle located within 12 inches of the rearmost extremity could prevent the trailer from properly extending over the paving machine.

Petitioners concede that they can design an RCC horizontal discharge trailer that would fall under the wheels back exception. Indeed, E.D. Etnyre & Co. (Etnyre), the only other manufacturer of RCC horizontal discharge trailers, has designed an RCC horizontal discharge trailer that falls under that exception. However, according to a temporary exemption petition previously filed by the petitioners, their customers have indicated that a wheels back design is

unacceptable, and therefore, the customers had no interest in purchasing their competitor's equipment (NHTSA Docket No. 2001-8827-25).<sup>5</sup> We hope to obtain more direct comments on this issue in response to this notice. In sum, it appears that an RCC horizontal discharge trailer that does not extend far enough over a paving machine cannot be used for its intended purpose. Accordingly, a wheels back design may not provide for a practicable solution for compliance with FMVSS No. 224.

### III. Petition

In their March 23, 2001 joint petition, Dan Hill and Red River requested that NHTSA amend FMVSS No. 224 to exclude construction controlled horizontal discharge trailers from FMVSS No. 224. According to the petitioners, the two parties together account for virtually all of RCC horizontal discharge trailer manufacturing. Approximately 0.12% of all trailers produced in the U.S. are RCC horizontal discharge trailers. Both manufacturers claim to have been unsuccessful in their independent efforts to develop an underride guard that is compliant, functional, and capable of interfacing with road-building equipment with which these vehicles are designed to work. Based on their attempts to manufacture a compliant trailer that remains functional and safe under real world operating conditions, petitioners believe that bringing RCC horizontal discharge trailers into compliance with FMVSS No. 224 is not practically feasible. Both manufacturers stated that the denial of their petition would effectively terminate production of RCC horizontal discharge trailers.

Petitioners maintain that a fixed underride guard cannot be installed in order to comply with FMVSS No. 224 because it would prevent paving machines from interfacing with (locking onto) the trailers during the paving operations. Petitioners have also been unable to design a practicable retractable underride guard<sup>6</sup> that would be engaged when an RCC horizontal discharge trailer travels to and from the actual construction sites, and retracted

when the RCC horizontal discharge trailer is attached to the paving machine.

According to the March 23, 2001 petition, designing a retractable underride guard suitable for this application has proven impractical for several reasons, chiefly among them the lack of adequate clearance. The edge of the RCC horizontal discharge trailer must extend over the paving machine in order to drop the hot asphalt mix into the hopper. Because paving machines differ in size and configuration, the trailer must allow for paving machines of different heights to slide under the conveyor structure. Typically, the paving machine openings are 31 to 35 inches off the ground. Conveyor structures of the RCC horizontal discharge trailers are normally 36 to 37 inches off the ground. As a result, the underride guard may have to retract completely against the conveyor structure, in order not to interfere with the paving machine. It appears that achieving such "flush" retraction has not proven feasible. Additionally, raising the overall ground clearance of the RCC horizontal discharge trailer in order to provide adequate clearance for a retractable underride guard would raise the center of gravity of the trailer, possibly making the vehicle more prone to rollovers.

Petitioners note that another difficulty in installing a retractable underride guard involves the location of a planetary gearbox that drives the conveyor system. The gearbox is located where a retractable underride guard system would otherwise be located. Further, asphalt accumulations on the underride guard cause certain maintenance problems, which have not yet been solved. Specifically, a retractable underride guard has mating surfaces that slide over each other. These surfaces would be under constant exposure to hot asphalt, which would result in mating surfaces sticking to each other. The hot mix asphalt materials that adhere to the guard surface may render it ineffective and may pose a risk of injury to the truck or machine operator.

Additional efforts by the petitioners to bring their product into compliance with FMVSS No. 224 have similarly failed. Specifically, petitioners considered adding removable underride guards. They rejected this approach because of concerns that workers would fail to replace the underride guard before transit.<sup>7</sup>

<sup>7</sup> Removable underride guards would allow manufacturers to meet FMVSS No. 224, even if

<sup>3</sup> Special Purpose Vehicle means a trailer or a semitrailer having work-performing equipment that, while the vehicle is in transit, resides in or moves through the area that could be occupied by the horizontal member of the rear underride guard. See 49 CFR § 571.224. Examples of special purpose vehicles are dump trailers, auto transporters, and trailers equipped with lift gates.

<sup>4</sup> However, in discussing a "rear-unload semitrailer" described by The National Potato Council as having a rear conveyor whose operation would be substantially impaired by an underride guard, NHTSA stated that assuming the Council was correct in alleging substantial impairment, such vehicle would qualify as a special purpose vehicle, despite a lack of any indication in our preamble that the conveyor actually resided or operated where the underride guard would be have been attached. See 61 FR 2004, at 2022.

<sup>5</sup> See also comments submitted by Keeler Construction Co., Inc., stating that a horizontal discharge trailer has to be able to interact with the paving machine in order to be effective (NHTSA Docket No. 2001-8827-4).

<sup>6</sup> Petitioners stress that their efforts to comply with FMVSS No. 224 have otherwise been successful. They were able to design functional underride guard systems for other types of discharge trailers. The petition asserts functional impracticability specific to trailers designed to interact with paving machines (NHTSA Docket No. 1997-3122-2).