

March 26, 1999

Refer to: HMHS-B51

Mr. David Bailey
Consource Plastic Recycling Corporation
207 N 12th Street
Tampa, Florida 33602

Dear Mr. Bailey:

Mr. Dean Alberson's March 4 letter to Mr. Richard Powers of my staff requested the Federal Highway Administration (FHWA) to accept your recycled polyethylene block for use with strong post metal-beam guardrail on the National Highway System (NHS). Included with his letter was a video tape of pendulum testing that was conducted to demonstrate the impact resistance of your product when used with a steel guardrail post.

We note that the chemical composition of the Consource Plastic Block-out that was tested was 85-95 percent High Density Polyethylene (HDPE), 0-5 percent each Low Density Polyethylene (LDPE), Polyethylene Terephthalate (PET), Polypropylene (PP), and 2-3 percent Colorant/Ultraviolet Protection (UV). Mr. Alberson's letter also indicated that a foaming agent (1 percent by weight) was used to reduce the total weight of each block to approximately 6.3 kilograms.

Pendulum testing consisted of swinging an 820-kg weight through a vertical drop of 4 meters. The plastic block was mounted between a short section of W-beam guardrail and a W6x9 rigidly-mounted steel post. A rigid post was used to eliminate the effects of varying soil conditions on post performance. In each test, the steel post bent just above its base plate and damage to the Consource block was only cosmetic.

Based on our review of the information submitted, the Consource Plastic Block-out may be considered acceptable for use on the NHS, in the dimensions shown in Enclosures 1 and 2, when such use is proposed by a transportation agency. As with all similar products, FHWA acceptance is based on the expected crash performance of your product and is not meant to address the long-term effects of weathering or UV degradation. We assume that you will provide agencies using your block a certification that the material composition is the same as was tested and shown above, and that you will address the durability/degradation issue as well.

Since your product is proprietary, its use on Federal-aid projects, except exempt, non-NHS projects, is subject to the conditions listed in Title 23, Code of Federal Regulations, Section 635.411, a copy of which is attached as Enclosure 3. Please do not hesitate to call Mr. Powers at (202) 366-1320 should you have any questions.

Sincerely yours,

(original signed by Dwight A. Horne)

Dwight A. Horne
Director, Office of Highway Safety Infrastructure

3 Enclosures