

HOUSE BILL NO. 2236

The issues surrounding Tire Disposal were pushed to the forefront in the 1970's and 80's by the realities of cost and the desire for environmentally sound disposal. The demands for responsible Solid Waste Management continue to increase. One of the reasons for this is the decline of the number of landfill disposal sites close to urban populations resulting in the need for long distance transport and consequently increased costs.

The days of cut rate tipping fees will soon be history as we move further into the age of "disposal debt" that faces today's taxpayers or rate payers to participate financially in three ways

- (1) Post Generation Mortgage on landfill closures/environmental remediation.
- (2) Management of ever increasing costs of Solid Waste Management.
- (3) Continuance to pay to build and finance state of the art progressive Solid Waste Facilities.

House Bill 2236 addresses as proposed the transportation of Waste Tires. I am here today to ask the Committee to go further in an attempt to better manage the waste tire disposal in Pennsylvania.

Pennsylvania must turn up the pressure on manufacturers to

produce recycled content products. Pennsylvania's Recycled Content Guideline for state purchase must be re-addressed. Pennsylvania must take a look at how EPA in the funding of the Recycling Advisory Council only looks to support minimum recycled content standards.

We in Pennsylvania must take advantage of the resource commodity (Scrap Tires) and promote utilization. There are three market segments for Scrap tires:

- (1) Tire derived fuel
- (2) Rubber Products
- (3) Civil Engineering Applications

In order to understand the commodity, one must be aware of the resource.

The current statistics of the Scrap Tire Management Council reports:

253 million scrap tires are generated annually. This number will be 275 million by the year 2000. Across the country there are 750 to 850 million scrap tires stockpiled.

The three markets again are, Tire Derived Fuel, Rubber products, including those made from ground, stamped, punched or cut rubber, and Civil Engineering Applications, such as road base and retaining walls.

The utilization of Scrap Tires, as a percentage of total generation, has increased dramatically. In 1990, 11% (25

million tires) were utilized. The figure rose to 38% (68 million) by 1992 and 56% (138 million) by 1994. At the end of 1995 the markets utilized 69% (175 Million tires).

In addressing transportation, permitting, etc. the product must be understood, the limitations explored.

In example, there are limitations on the potential use of stockpiled tires, as opposed to scrap tires, which are processed/utilized immediately.

Stockpiled tires cannot be economically processed into ground rubber because they tend to be covered with dirt which is a contaminant. The best uses for these tires are either as a fuel or in a civil engineering application.

Tire derived fuel markets nationwide consumed 131 million Scrap Tires in 1995. Fuel markets for the product consist of cement kilns, pulp and paper mills and industrial boilers. While addressing transportation, we must not just consider today, but the future and the disposal/utilization options- past present and future have to be explored. A combined cause and effect must be reviewed. Future industrial growth coupled with the cost effective energy production could be a win/win situation for many struggling areas through out the Commonwealth.

Programs cost money. Where could funding come from? A review of the Federal format of Special Tax Treatment of the

timber and mining industries which surpasses the billion dollar mark annually under programs as "Cost Effective Energy" should be undertaken. In our Commonwealth adoption of the Federal Format coupled to our Brown Fields utilization Program would entice a developer to site industry where cost effective energy is available.

Data for 1996 indicates that 152 million scrap tires were used as whole or processed into Tire Derived Fuel. The wheel does not have to be re-invented in the Commonwealth. The US Environmental Protection Agency has collected enough data from around the country and can provide a wealth of emissions data for our PA DEP Bureau of Air Quality Permitting to be satisfied that most achievable control technology in air emissions can be met by today's manufacturers.

Ground Rubber Product

Two sources for ground rubber are tire buffings and whole scrap tires. Tire buffings, a by product from retreading, represents 62% of the market but the supply is finite. The number of retreaded tires has leveled off at 30-33 million units/year. The steady growth in ground rubber products therefore must be supplied by increased recycling of Scrap Tires.

The six categories or markets for ground rubber are:

(1) Bound Rubber Products - Utilize ground rubber formed into

a set shape, usually held together by an adhesive material (urethane or epoxy). Examples are carpet underlay, flooring, dock bumpers, railroad crossing blocks and roof walkway pads. This market consumes 113 million pounds of recycled rubber.

- (2) New Tire Manufacture - Very finely processed scrap rubber has been used as a low volume filler matted in the tread and sidewall of a tire. In general, scrap tire rubber has been limited to a maximum of one and one half percent of the new tire by weight. This market segment consumes 32 million pounds of recycled rubber annually. This could potentially increase. Michelin North America is demonstrating that up to 10% recycled Scrap Tire rubber can be incorporated into new tires without ill effects.
- (3) Rubber modified Asphalt - Which consumes about 41% of the total ground rubber produced in the U.S. Markets were greatly influenced by the passage of Section 1038 of the Intermodal Surface Transportation Efficiency Act (ISTEA) which mandated use of recycled material in Federally Funded Highways. Because of virgin content asphalt manufactures' cries to their congressional representatives, the mandate was repealed in 1995. However, research requirements were strengthened and Rubber Modified Asphalt development grants were funded.

Field studies addressed performance, mix, recyclability, standards, etc. The studies are complete, the facts are in and the path has been cleared for greater use of RMS in paving projects. California, Arizona and Florida already use RMA on a routine basis.

- (4) Athletic and recreational applications are the fourth. These include running track material, a soil enhancer for grass fields and an alternative playground surface.
- (5) Injected molded products and extruded goods such as shoes and carpet backing.
- (6) Lastly, friction brake material used particulate rubber in brake pads and brake shoes.

Cut and Stamped:

One of the oldest markets for Scrap Tires is the cut and stamped products market. Small parts are die cut or stamped from the "tire carcass". This market is estimated at 8 million tires or 3.5% of the total Scrap Tire market.

Examples of small die cut parts are muffler hangers, snow blower blades, door mats, wheel ducks, dock bumpers and support pads for backhoes.

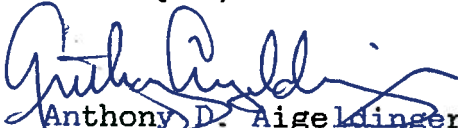
Civil Engineering Applications:

Whole or shredded Scrap Tires can be used for leachate collection systems, landfill cover, artificial reefs, clean fill for road embankments and road bed supports. In 1995

about 12 million scrap tires were used in this capacity. Acceptance and use of Scrap Tires in civil engineering can be attributed to cost and performance. Scrap Tires can be processed to appropriate specifications for less than \$36 a ton. Approximately the cost of soil and subsequently less than some other fill materials.

In closing, I ask that the detail of this testimony be examined by your committee and that funds be made available to promote the Scrap Tire utilization efforts in the Commonwealth.

Thank you,


Anthony D. Aigeldinger