Scrap Tire NEWS

Covering The News And Developments In The Scrap Tire Recycling Industry

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EPA Seeks Public Input on Boiler, Incinerator Rules

The U.S. Environmental Protection Agency (EPA) is seeking additional public comment and more information on the final standards for industrial boilers and solid waste incinerators it issued in February 2011. As part of the reconsideration process, EPA also said it will issue a stay postponing the effective date of the standards.

This process of careful consideration of public comments, and close attention to both costs and benefits, is consistent with President Obama's directives with respect to regulation, in executive order 13563, issued on January 18, the agency said.

Following its April 2010 proposals, the agency received more than 4,800 comments from

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Recycle Atlanta Puts Focus on Rubberized Asphalt

Several top decision makers from a various entities who oversee tire recycling and road construction gathered in Georgia for Recycle Atlanta, May 24 at the invitation of Liberty Tire Recycling .

The one-day educational event featured a technical seminar focused on rubber modified asphalt and Green Space:Atlanta a networking forum showcasing tire recycling products, manufacturing and applications.

Recycle Atlanta attendees learn about the advantage of rubber modified asphalt (L-R): David Painter, State Representative Randy Nix, Tom Rosenmayer, Wayne Marshall, Steve Smith, Doug Miller, Shaista Begum, Ryan Alleman, Kendra Davis, Doug Carlson, Dick Gust, Peter Wu

Among those attending, Georgia state representative Randy Nix (District 69) commented that he came to learn more about scrap tires since he sponsored legislation earlier this year that addressed the state's tire fee.

"One of the things I came away with today is a true understanding of the value and benefits of tire recycling and rubberized asphalt to communities throughout Georgia, "Representative Nix told Dick Gust, Vice President, National Collections for Liberty Tire Recycling and coordinator of the Recycle Atlanta program.

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California Funds Projects To Help Expand RAC and TDA Markets

CalRecycle considers funding For recycled rubber projects

The California Department of Resources Recycling and Recovery (CalRecycle) is reviewing several projects on its Waste Tire Program funding docket that could provide the pathway to expanding the use of recycled rubber in the state. The contracts under consideration propose applications in the civil engineering arena for tire-derived-aggregate (TDA) and rubberized asphalt concrete (RAC).

A $230,000 proposed contract award would require CSU Humboldt - the proposed contractor - to delve into an evaluation of engineering properties for TDA in septic system construction. The proposed scope-of-work includes building a septic system leachfield using TDA as the drainage media and gathering data on the TDA performance. The goal is to gather "California-specific" data, according to CalRecycle officials. If the data supports TDA in leachfields, CalRecycle will request the State Water Resources Control Board to consider using TDA in its septic system regulation.

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Nix, who attended the rubberized asphalt presentation and spent time touring Liberty's tire processing facility, expressed his interest in developing a public/private partnership to promote the use of rubberized asphalt and other recycled rubber products and applications to the various levels of state and municipal government. "We learned how good this product is for Georgia's roads and all about the benefits," Nix said. "Now, how can we make this happen?"

Nix suggested a follow-up program in the Fall and offered assistance in gathering attendees from other agencies including the departments of environment and public works.

Approximately 517 lane miles of rubberized asphalt have been placed on Georgia highways in more than a dozen projects since 2007 and the number is growing, according to Peter Wu, bureau chief of technical assistance at the office of Materials and Research for the Georgia Department of Transportation (DOT) . "They are all performing and serving the driving public", Wu told those attending Recycle Atlanta.

"Rubber is a product that provides long-term supply and is a more cost-effective and competitive way to modify asphalt," Wu said. "In addition, it provides an outlay for scrap tires that may otherwise end up in landfills." In all, the projects used 3,300,000 pounds of recycled rubber--the equivalent of 330,000 scrap tires.

For the Georgia DOT, interest in increasing the use of rubber modified asphalt in the state traces back to 2008 when the price of crude oil hit $147 a barrel and the association of modified asphalt producers announced a shortage of styrene butadiene polymers (SBS) for the asphalt industry. This confluence of economic factors spurred Georgia DOT engineers to consider alternate materials or construction methods that could reduce project costs while maintaining pavement quality and longevity, Wu commented.

At the same time, the Georgia DOT, which had in the past place several test sections of asphalt pavement incorporating crumb rubber in the mix, was pursuing experience with a new rubberized asphalt technology. The technology, developed by Illinois-based Rubber Asphalt Solutions , LLC, involved the inclusion of trans-polyoctenamer (TOR) with the rubber to improve workability of the crumb rubber modified mixture.

Starting in 2007, the Georgia DOT placed a series of test sections on I-75 and on several state roads including a 9.5mm Superpave with 45 % RAP (reclaimed asphalt pavement) modified with a crumb rubber design mix consisting of 10 % ground tire rubber by weight of the asphalt cement and the TOR polymer added at a 4.5% rate based on the weight of the rubber. The crumb rubber/TOR modifier was dry -fed directly into the hot mix plant mixing chamber.

" The test sections passed all Georgia's quality control and quality acceptance requirements, including smoothness and density," Wu said.

State Rep Randy Nix (center) gets a first-hand look at how crumb rubber is made during a tour of Liberty's processing facility.

Georgia DOT continued its research in 2008, placing more projects using the dry process to incorporate the crumb rubber modifier and experimenting with the amounts of crumb rubber/TOR modifier and RAP to see if they could maintain the same positive results.

Based on the successful results of the 2007 and 2008 projects, the Georgia DOT approved a special provision for crumb rubber modifier in Section 820 of the state materials specification that states "Crumb rubber modified PG 76-22 is an acceptable alternative to SBS or SB modified asphalt and can be used at the contractor's discretion." It also specified the quality of the rubber as "30 mesh size ambient or cryogenic ground tire rubber at 10% of weight of total asphalt cement content. Trans-Polyoctenamer shall be added at 4.5% of the weight of the crumb rubber to achieve better particle distribution."

"What this did was allow rubber into the performance grade specifications, "Doug Carlson, Vice President, Asphalt Products, Liberty Tire Recycling said. "Prior to this crumb rubber had been excluded from the PG-specifications. Now it can go head-to-head with polymers in Georgia highway and state road projects."

One of the most promising results of Georgia's rubberized asphalt projects is the ability to use rubber with RAP. This pairing has proven to be beneficial is several ways. It means additional savings from the use of reclaimed materials versus virgin materials, Carlson said. And, Georgia researchers found that with the appropriate formulation, crumb rubber modified asphalt can actually improve workability and thus allow higher percentages of RAP materials, further reducing the demand for virgin asphalt.

Given the high price of polymers and asphalt, this can be a direct cost savings to asphalt producers and states of up to 10 percent per ton, Carlson said.

"Both crumb rubber and RAP are "green asphalt", Wu said, noting that each is a reclaimed material that can be recycled at the end of pavement life reducing the need to use valuable landfill space.

Besides cost savings and improvements to the environment, experience in other states has shown that rubber modified asphalt pavements are more durable and extend the service life of the road as much as 60 percent. Roads stay darker and finished roads are quieter and smoother

creating better driving conditions for motorists. Safety studies have also shown that rubber modified pavements allow for better skid resistance and decrease the stopping distance for vehicles in wet or dry conditions. And, Liberty's Carlson reported that in Texas studies have demonstrated improved visibility of pavement markings in wet and inclement conditions.

Peter Wu believes other states' experience with durability and the robust structure of crumb rubber pavement will potentially lower the life cycle cost of crumb rubber modified pavements.

"It's important to Georgia's research to see the commonalities as well as the progress and developments in other states," he said.

The asphalt industry and the Georgia DOT will continue the research partnership and evaluate the performance of the rubber modified asphalt sections, which may become an alternate paving material in the state, Wu said.

"Just as important," Peter Wu said, "is getting the message out to municipal road departments in the state." While the Georgia DOT is responsible for 1800 center lane miles, cities and counties control 10,000 center lane miles in Georgia. Wu, who also participates in the Federal Highway Administration Long Term Pavement Performance Program, proposed working with Liberty to help city and county public works officials become more aware of Georgia's Section 820 specification and how to facilitate the use of crumb rubber modifier on their streets and roads.

One of Liberty's goals for the Recycle Atlanta program was to provide exposure to what other states are doing with rubberized asphalt, Doug Carlson said. For example, Louisiana, Florida and Alabama have programs similar to Georgia's PG specification for crumb rubber modifier. Alabama is now specifying rubber modified asphalt pavement on a case-by-case basis, Carlson said.

Liberty also wanted to raise awareness to the technical and cost saving characteristics recycled rubber brings to rubberized asphalt and many other products, Liberty's Dick Gust said. "Crumb rubber has come a long way from the early days of processing scrap tires. Today, it's recognized as a raw material with engineered and material properties that make it a desirable feedstock in many products and applications."

In the asphalt arena, for example, crumb rubber now costs less than most polymers, has performance properties equal to or better than polymers and is readily available.

"New technologies take time, " Gust said. "They aren't easy to introduce in an established , time-tested industry like asphalt. By creating this exchange of ideas between the public and private sectors and providing educational training, we want to lead the way in advancing new products and services that will provide sustainable outlets for the millions of scrap tires generated annually in Georgia and the nation." ◆

Community Outreach

Liberty Tire Recycling donates services to local Arts Center

ACJ Photo

Liberty crews removed more than 1,000 abandoned tires from the Arts Exchange

Last month, Liberty Tire Recycling donated its tire collection and reclamation services to help solve a difficult andpotentially costly dilemma facing an Atlanta-area community center. Crews from the company's plant in Atlanta collected and recycled more than 1000 scrap tires that were illegally dumped on the property of The Arts Exchange, a non-profit community center.

Employees at The Arts Center had been working to resolve the situation since they discovered the tire piles last November. When they began making inquiries into how to remove the tires, they learned that the center could be charged as much as $2 per tire to have the scrap tires removed, resulting in thousands of dollars in costs.

"We are a nonprofit arts center that aims to provide affordable work space for visual and performing artists," said Lisa Tuttle, a board member at The Arts Exchange and a studio artist. "As you might imagine, we have limited resources." Tuttle praised Liberty Tire's willingness to clean up the tires at no cost calling the effort " a benefit for the center and the Atlanta-area community."

"When the center contacted us to tell us what they were facing, we were happy to offer our assistance at no charge," Dewey Grantham, regional sales manager for Liberty Tire Recycling said. Grantham expedited the May 17 cleanup noting that " with the warmer months upon us, abandoned tire piles can pose health risks. They also pose a fire hazard. The Arts Exchange certainly doesn't want to face such a situation when they host outdoor activities for children," he said.

Once the tires were collected, they were taken to Liberty's Atlanta tire recycling plant and processed into crumb rubber which Liberty sells as mulch for landscaping and playgrounds; infill for synthetic athletic fields; and rubberized asphalt. ◆