



SUPERIOR ROAD SOLUTIONS FOR OVER 75 YEARS

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SPRING/SUMMER 2012

Special points of interest:

- TEAM—March 14-16
- APWA—April 17-19

Inside this issue:

<i>Capital Improvements in 2011</i>	1
<i>Jim Martin</i>	1
<i>Upgrades Made to our Microsurfacing Operation</i>	2
<i>Boone County Applies GSB-88</i>	2
<i>Stabilizing Concrete Pavement with Asphalt Cement</i>	3
<i>Meet our New President Greg McMurtrey</i>	4

Capital Improvements in 2011 Focus on Customer Deliverables

Over the last year, Missouri Petroleum has invested significant resources on the installation of a new rail system and boiler to service our Woodson Road terminal. We also relocated and updated our laboratory to allow us to improve our binder testing capabilities. “These two improvements will allow us to provide a seamless level of integrated service with a focus



Our new binder lab in Olivette, Missouri is fully equipped to accomplish a wide variety of asphalt tests.



A new rail system was installed along the western perimeter of Missouri Petroleum’s yard

on quality and economic benefit for our customers” cited Henry Schmitt, Vice President of Sales and Operations.

New testing equipment was purchased to identify and grade modified performance grade asphalt cements. The new rail system will provide more supply options for the base stock used in our products.

In November we were saddened to hear that Jim Martin, one of our longtime friends and a coworker, passed away. Jim Martin passed away suddenly on Sunday, November 6, 2011. Jim was responsible for blending and testing the cutback asphalt produced at the Woodson Yard. He performed the required test on these products to assure they met industry standards and that state certifications were maintained. “It’s difficult to replace someone with over 25 years in the industry. We are going to miss Jim for his contributions both in and out of the lab” cited Vice President, Henry Schmitt. The hearts and prayers of the Missouri Petroleum family go out to Jim’s wife Jackie and their loved ones.



Upgrades Made to our Microsurfacing Operation

Last year, Missouri Petroleum acquired a new Continuous Pave Microsurfacing machine. The continuous pave unit, with the use of “feeder trucks”, has the ability to place microsurfacing material in a non-stop operation. The advantage of the continuous pave unit is realized



Truck Mounted Unit



Continuous Pave Unit with support vehicle

on Interstates and Arterial Routes where straight pulls can be accomplished with a high level of efficiency.

Truck mounted units are designed to haul all of the material components of the microsurfacing system on board. While truck mounted units are less productive on straight pulls, they are more efficient on residential streets where turning radii, cul de sacs and short pulls are encountered.

Boone County Applies GSB-88 Preservation Seal on a Variety of Roads

Like most agency officials faced with budget constraints, Boone County Engineers were looking for low cost preventative maintenance solutions for their roads. They chose to use GSB-88 Pavement Sealer and Rejuvenator on approximately 40,000 square yards of asphalt pavement. The surface of the streets varied in condition from “recently paved” to “seriously oxidized”. Several chip sealed streets were also treated. “We wanted to test the product on several different surfaces” advised Dan Haid, an engineer from Boone County. The county hopes to achieve a four year life from the GSB-88 treated pavements.

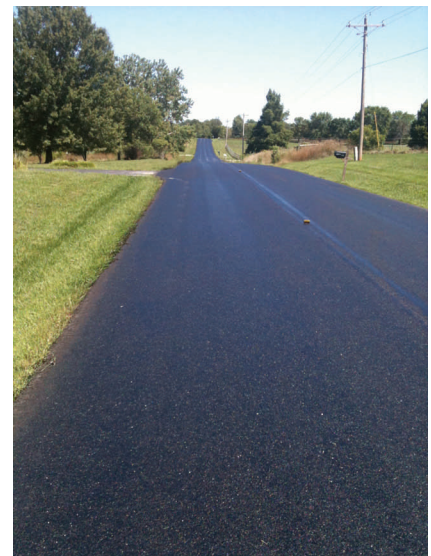
GSB-88 is an emulsified, gilsonite modified asphalt product containing light fraction maltenes or rejuvenators. While the maltenes rejuvenate the pavement, the low penetration Gilsonite asphalt seals the

pavement. Unlike many fog seals and rejuvenators, the GSB-88 system has minimal effect on the skid resistance of most pavements which makes the application of sand an option and not a requirement.

GSB-88 is manufactured and ap-



GSB-88 applied to a limestone chipseal



GSB-88 applied to a 1 year old asphalt surface

plied by Missouri Petroleum in association with Asphalt Systems Inc. Please contact Pat Palmer at 314-330-8633 or at ppalmer@lionmark.com if you would like additional information on GSB-88.

Stabilizing Concrete Pavement with Asphalt Cement

Concrete pavement stabilization, otherwise known as asphalt undersealing, has been part of the industry's maintenance arsenal for decades. The process is relatively simple. Full depth holes are drilled into the pavement. Stiff (low penetration) asphalt is then pumped into the subgrade through a pressurized injected device at temperatures between 350°F and 450°F. The asphalt in its liquid

which is only about 15% of its compressive strength, cannot accommodate heavy traffic loads and cracks develop. Failures identified as mid-panel transverse cracks, corner cracks, joint delamination and slab faulting are often attributed to subsurface voids. Asphalt underseal re-establishes subgrade support to the pavement and reduces the impact of the flexural stresses in the concrete.



The asphalt undersealing operation

state flows under pressure to efficiently fill all subsurface voids including the areas occupied by water. The asphalt then hardens to provide a rigid base for the overlying concrete pavement.

Portland cement concrete has strong compressive strength values but is relatively weak in flexural strength. As voids develop under the pavement, flexural stresses develop on the bottom section of the slab. The flexural strength of the concrete,

In 2006, the Missouri Department of Transportation (MoDOT) wanted to resolve a long standing problem on Route 67 immediately north of the Arkansas state line. Subsurface voids under a several mile section of this highway were causing accelerated deterioration of the concrete slabs. Water was being forced from the joints under the loads of heavy vehicles.

A reconstruction fix would be expensive. MoDOT performed a cost analysis and decided that an asphalt underseal and a 3 3/4 inch overlay was the most cost effective option.

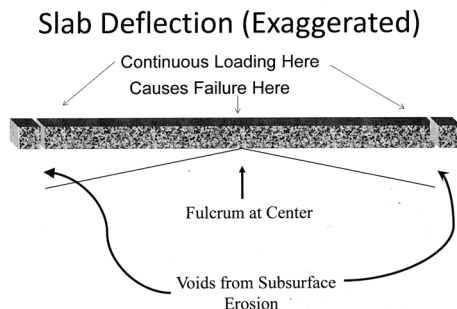
Missouri Petroleum spent approximately 20 days drilling 7,551 holes and pumping 354,400 gallons of M-238 air blown asphalt cement in a successful effort to stabilize the pavement. Pace Construction Company then paved the roadway.

Original estimates for reconstruction of the pavement came in at just under \$19,000,000. The project underseal and overlay project cost \$3,730,035 delivering over \$15,000,000 in savings to Missouri Tax Payers.

District Engineer, Mark Shelton, advised that "Prior to undersealing and overlaying this section of roadway, we were continuously performing concrete pavement repairs costing us thousands of dollars every year. Now after five years of service, we still have not had to do any pavement maintenance. I couldn't be more pleased with the performance of the undersealing and overlay."



Water Pumping from the subgrade of Rte. 67 before repairs





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Our Company is comprised of a diverse team of professional who can offer you advice through each step of your project. Safety is our paramount priority. Service excellence is our Goal

*Superior Road Solutions For
Over 75 Years*

**We're on the web:
www.missouripetroleum.com**

Meet our New President



In the Spring of 2011, a new leader grabbed the mane of the Missouri Petroleum Lion. Greg McMurtrey, P.E., former President of West Plains Bridge Company, was appointed President of Missouri Petroleum. Greg, a registered professional engineer and graduate of the University of Missouri, Columbia, started his career with CALTRANS then spent some time consulting at Jacobs Engineering before moving to Missouri.

Greg advised that he was excited to be part of a well established team of professionals. "I look forward to working with the Missouri Petroleum team as we strive to provide quality products and services, done safely, that exceeds our customer expectations."

Greg has been married for 19 years to his wife, Melissa. They have two children.