COMMERCIAL MOTOR VEHICLE ROADSIDE TECHNOLOGY CORRIDOR

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Technology Corridor News

Federal Motor Carrier Safety Administration

Office of Analysis, Research, and Technology

FMCSA Establishes Commercial Motor Vehicle Roadside Technology Corridor in Tennessee

On August 7, 2007, the Federal Motor Carrier Safety Administration (FMCSA) launched the Commercial Motor Vehicle Roadside Technology Corridor (CMV RTC) at a keynote address given by FMCSA Administrator John Hill.

The FMCSA has established the CMV RTC for the purpose of testing new truck and bus safety inspection technologies and will work in partnership with the Tennessee Departments of Safety and Transportation, Oak Ridge National Laboratory (ORNL), and the University of Tennessee (UT). ORNL has the lead role for coordination and management of CMV RTC activities as part of a multi-year interagency agreement with the FMCSA.

The CMV RTC is currently bounded by the Knoxville, TN CMV inspection station located on I-40 (east and west bound) and the Greene Co. inspection station located on I-81 southbound. There is approximately 70 miles of interstate highway between the two facilities.

The vision for the CMV RTC is to have established and ready testing facilities at the inspection stations along the corridor to demonstrate, test, evaluate, and showcase innovative safety technologies in real-world conditions in an effort to improve commercial truck and bus safety.

The benefits of the CMVRTC are to showcase inspection technologies and highlight their systematic integration with existing enforcement operations and highway information systems by our State partners at the Tennessee Department of Safety (TDOS) and the Tennessee Department of Transportation (TDOT). Data gathered from experiments and field tests along the Corridor will be used to support FMCSA enforcement and compliance programs, state safety programs, policy research and future rulemaking activities.

A TDOS Officer Explains Technology Being Utilized as a Part of the CMV RTC

Coming Next Quarter:

The vision for the CMV RTC is to have established and ready testing facilities at the weigh stations along the corridor to demonstrate, test, evaluate, and showcase innovative safety technologies in real-world conditions in an effort to improve commercial truck and bus safety. (Page 1)

FMCSA has given the go-ahead to begin planning the next WRI phase, the WRI Pilot Test. (Page 2)

CMV PBBT Inspections Exceed 700

In the month of August 2008, the number of commercial vehicles to receive a performance-based brake inspection at the Greene County, Tennessee Commercial Vehicle Inspection (CMV) Station exceeded 700.

The Performance-Based Brake Tester (PBBT) in Greene Co. became operational in August 2007 and is currently being used by the Tennessee Department of Safety (TDOS) for screening vehicles for possible brake issues and for enforcement of FMCSR 395.52(a) *Failure to develop a total brake force as a percentage of gross vehicle or combination weight of 43.5 or more on an approved PBBT.* Since the PBBT was add to the North American Standard Out-of-Service (OOS) Criteria in April of this year, 250 Vehicles have been inspected by TDOS using the PBBT.

In addition to the enforcement use of the TN based PBBT, the Oak Ridge National Laboratory (continued on back page)

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is conducting CMV related brake research using the PBBT machine and the data collect by TDOS. ORNL, with the support of TDOS, is conducting the Brake Wear and Performance Test (BWPT) using eight commercial vehicles from four different vocational fleets. Each vehicle in the field operational test received a foundation brake rebuilt in the fall of 2007 and is currently being monitored monthly using the PBBT for changes in brake force as a function of brake application pressure. ORNL is also conducting a correlation study comparing the PBBT inspections conducted by TDOS personnel with companion NAS Level-1 (Level-1) inspections conducted on the same vehicle at the same time. To date over 500 Companion PBBT tests and Level-1 inspections have been conducted for this study. Analysis of the collected data is currently underway and initially shows a strong correlation between vehicles being out of service on the PBBT and being place out of via a Level-1 inspection. The BWPT project is scheduled to be completed in the fall of '09 following an 18-month field operational test. It is expected that the correlation study will be completed by the end of the summer.

A tractor-trailer receives a PBBT

FMCSA Prepares for Phase II of the WRI Program

A TDOS Officer Interacts with the WRI User Interface

Following the successful conclusion of the Wireless Roadside Inspection (WRI) Proof of Concept (POC) testing conducted in June-July 2007, in which a Safety Data Message Set (SDMS) was wirelessly transferred from a Class-8 tractor trailer to a roadside inspection station as well as to a mobile enforcement vehicle, FMCSA has given the go-ahead to begin planning the next WRI phase, which involves the pilot testing of various technology platforms.

The WRI program seeks to utilize existing and near-term technologies and systems to wirelessly identify a commercial vehicle, the vehicle's operating carrier, and the vehicle's driver. Additionally, the status of the driver and carrier would be provided to the reviewing authority (hours-of-service, operating authority, etc.).

The goals of the WRI Pilot Test are to refine the WRI Concept of Operations and System Architecture; validate major communications platforms (commercial mobile radio services, 5.9 GHz Dedicated Short-range Radio, and universal vehicle identification technologies); explore user incentives and enforcement interdiction strategies; conduct outreach to stakeholders; and conduct vehicle-to-back-office system testing.

In order to reduce cost and maximize return on investment, the WRI program will partner with other state and federal programs during the Phase II. Partner programs will include the New York State Department of Transportation's Commercial Vehicle Infrastructure Integration; The State of Kentucky's Commercial Motor Vehicle Universal Identification effort; and the Department of Energy's Heavy Truck Duty Cycle Program.

The WRI Pilot Test will officially begin in the August-September timeframe with a kick-off meeting in Washington, DC. This phase of the WRI program is expected to be completed in 2011.