

**TCET - Emissions Reducing Grant
Demonstration of New Technology ¥ Project Status and Completion Report**

7. Abstract of work completed during the quarter

Cleaire received California Air Resources Board (CARB) verification for the Longview on April 11, 2003 for vehicles with 1994-1997 Cummins M11 and International DT466 engines. The CARB website has the verification letter (<http://www.arb.ca.gov/diesel/verifieddevices/ltrs/longview.pdf>). Even though there is no direct reciprocity between CARB and EPA, Cleaire considers the achievement of CARB verification as a significant accomplishment and supportive of our efforts to achieve EPA verification.

Cleaire submitted a revised verification application to EPA on May 28, 2003. However, EPA has recently modified their verification process and it is too soon to tell the impact on the project schedule. With the first CARB verification for Longview behind us, Cleaire is prepared to devote more resources to the EPA verification process in order to keep it on the critical path for the tasks that are within Cleaire's control. We have also initiated discussions with EPA on the specific test procedures and other matters that need to be finalized before EPA authorizes verification testing for the Longview. Cleaire is still hoping to test the Longview at Southwest Research Institute (SwRI) in San Antonio, Texas during the summer of 2003.

Cleaire continues to expand its manufacturing, distribution and support infrastructure to enable large-scale deployment in California to be followed soon thereafter nationally including Texas. Cleaire has now sold and installed more than 60 emission control systems in California. As of May 31, 2003, Longview systems have logged more than 650,000 miles over more than 28,000 hours of on-highway operation. In May 2003, a Longview system was installed and has been operating successfully on a transit bus belonging to the Washington Metro Area Transit Authority. More Longview systems will be installed on the transit agency's busses in the near future.

The TCET has generously provided a grant to Cleaire to pay for the EPA testing at Southwest Research Institute. Upon EPA verification, emission reductions provided by Longview systems installed on diesel engines in Texas will be creditable to the Texas State Implementation Plan (SIP). Both on-road and off-road diesel engines are a significant source of emissions. Deployment of the Longview, especially in the Houston-Galveston area, will make a significant contribution to the attainment of Texas clean air goals.

The Cleaire Longview is an integrated device that reduces NO_x, PM, HC and CO from diesel engine exhaust. The Longview consists of NO_x reducing catalysts (NRC), a catalyzed diesel particulate filter (DPF), a reagent (diesel fuel) delivery system and a control system. The Longview is installed as a muffler replacement. The system is further described on the Cleaire website at www.cleaire.com.

Successful testing and field trials over many hours and miles since October 2001 have given Cleaire confidence to pursue California Air Resources Board (CARB) and US EPA verification for the Longview. The initial focus for deployment will be transit buses to be followed by line-haul trucks, vocational vehicles and off-road equipment.