

## CCS successfully treats high-volume submicron particulate

**T**ri-Mer Corp., developer of Cloud Chamber System (CCS) technology, recently teamed with U.S. air quality authorities on a full-scale demonstration of the CCS against diesel pollution at the train yard in Roseville, Calif.

With the successful demonstration test, CCS is now regarded as the first technology to demonstrate high removal efficiencies when operating at the flow volumes typical for large diesel engines. A similar test is planned for the Port of Long Beach on emissions from diesel generators of ships at dock – another key priority for local and national officials. The CCS technology is being applied to numerous



Government agencies contracted with an independent third-party testing company to test, analyze and document particulate matter, SO<sub>2</sub>, and NO<sub>x</sub>.

other difficult applications as well. Units have operated 24/7 for more than six years with low operating costs, and very low maintenance costs, according to the company.

The test was significant not only for the specific application tested – emissions from locomotives that are immobile or moving short distances within a rail yard – but for all emitters of stationary diesel exhaust from large diesel engines.

Diesel exhaust (DE) is widely recognized as one of the most difficult to treat emissions. It contains fine and submicron particulate matter (PM), NO<sub>x</sub>, and SO<sub>2</sub>. DE emissions include more than 40 substances listed by EPA as hazardous, as well as arsenic, benzene and formaldehyde. DE has serious potential to cause cardiovascular and pulmonary diseases. EPA has proposed classification of DE as a human carcinogen.

The official report is posted on the Placer County Air Pollution Control District website, [www.placer.ca.gov/apcd](http://www.placer.ca.gov/apcd) under the project name Advanced Locomotive Emissions Control System (ALECS).

Tri-Mer provided the diesel pollution control technology, including engineering, manufacturing and installation. After using its own particulate characterization equipment to calibrate the ALECS system, the government agencies contracted with an independent third party testing company to test, analyze and document particulate matter, SO<sub>2</sub>, and NO<sub>x</sub> for the final report.