



Fact Sheet

California Environmental Protection Agency

 **Air Resources Board**

Transport Refrigeration Units (TRUs)

#1

What is a TRU?

TRUs are refrigeration systems powered by diesel engines designed to refrigerate temperature-sensitive products that are transported by semi-trailer vans, truck vans, shipping containers, and rail cars.

What is a TRU Gen Set?

Shipping containers with temperature-sensitive cargo come and go on ocean-going ships through ports. When these containers are on the ship, their electrically-driven refrigeration systems are plugged into ship power. But when these containers are transported on land, a diesel-powered generator (TRU gen set) is typically attached to the container to provide electric power to the refrigeration system. Larger TRU gen sets may also provide electric power to several refrigerated containers when transported on container railcars.

Why is ARB concerned about diesel TRU engines?

Diesel engines emit a complex mixture of air pollutants, mainly composed of gaseous and solid material (i.e. soot) known as diesel particulate matter (diesel PM). In 1998, the California Air Resources Board (ARB) identified diesel PM as a toxic air contaminant based on its potential to cause cancer and other adverse health effects. In addition to PM, diesel fueled engines emit over 40 other cancer causing substances. Although TRUs and TRU generator sets have relatively small engines, there are currently about 49,000 of them in California, and when they congregate at distribution centers, ports, truck stops, and other facilities, they can pose a significant health risk to those that live and work nearby.

What does ARB plan to do to reduce emissions from TRUs?

A regulation is currently being developed to reduce diesel PM emissions from TRUs and TRU gen sets. This regulation will address emissions from in-use (existing) TRUs and TRU gen sets. In addition, new engine emission standards have been proposed by the U.S. Environmental Protection Agency, which ARB will also adopt, that will provide cleaner engines for future TRUs and TRU gen sets. The ARB will continue to follow new technology developments that may be effective in reducing diesel PM emissions from these engines and will verify such technologies through its *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines*. By requiring new TRUs and TRU gen sets to meet increasingly more stringent engine emission standards and requiring the retrofit, replacement, or re-powering of in-use TRUs and TRU gen sets, significant reductions of diesel PM emissions will occur, reducing the risk levels near distribution facilities.

For More Information

Please contact ARB's Public Information Office at (916) 322-2990, or access ARB's TRU web site at www.arb.ca.gov/diesel/tru.htm. To be notified about workshops and meetings, sign up on the web at <http://www.arb.ca.gov/diesel/lists.htm>. If you have special accommodation or language needs, please contact Ms. Linda Keifer at (916) 323-4327 or lkeifer@arb.ca.gov as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our web site: www.arb.ca.gov.