

UPDATED INFORMATION DIGEST

AMENDMENT OF THE AIRBORNE TOXIC CONTROL MEASURE FOR IN-USE DIESEL-FUELED TRANSPORT REFRIGERATION UNITS (TRU) AND TRU GENERATOR SETS, AND FACILITIES WHERE TRUs OPERATE

Sections Affected: This action amends California Code of Regulations (CCR), title 13, Division 3, Chapter 9, Article 8, section 2477.

Background: Over 90 percent of Californians breathe unhealthful air at times. To improve air quality and human health, ARB establishes requirements to reduce emissions from new and in-use on-road and off-road vehicles, engines, and other sources.

In 1998, the California Air Resources Board (ARB or Board) identified particulate matter emissions from diesel-fueled engines as a toxic air contaminant. Two years later, in September 2000, the Board adopted the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Plan). The Plan established a goal of reducing emissions and the resultant health risk from virtually all diesel-fueled engines and vehicles within the State of California by the year 2020. The Plan included a goal of reducing diesel PM by 85 percent in 2020 from the baseline emissions in 2000. The Plan also identified various control measures for achieving the goals. These measures included new, more stringent standards for all new diesel-fueled engines and vehicles, the replacement of older in-use engines with new, cleaner engines, the use of diesel emission control strategies on in-use engines, and the use of low-sulfur and alternative diesel fuels.

TRU diesel engines currently emit approximately 1.6 tons per day of diesel PM. Staff believes that there are situations where the estimated 70-year potential cancer risk resulting from exposure to diesel PM emissions from TRUs is in excess of 100 in a million. This is because of the high cancer-causing potential of diesel PM and the potential for large numbers of TRUs to operate at one location, such as distribution centers located near residential areas.

On May 16, 2002, the Board approved the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines* (title 13 CCR, sections 2700-2710). This rule establishes procedures for the verification of diesel emission control strategies by ARB that can be applied on various diesel-fueled engines and vehicles to significantly reduce diesel PM emissions.

Health and Safety Code sections 39666 and 39667 require the ARB to adopt regulations to achieve the maximum possible reduction in public exposure to toxic air contaminants through the application of best available control technology (BACT), or a more effective control method, in consideration of cost, risk, environmental impacts, and other specified factors.

The *Airborne Toxic Control Measure for In-Use Diesel-Fueled TRUs and TRU Gen Sets, and Facilities where TRUs Operate* (TRU ATCM) is part of ARB's ongoing effort to reduce PM emissions from diesel-fueled engines and vehicles and improve air quality. The Board approved the TRU ATCM for adoption on February 26, 2004, and it became effective December 10, 2004. The TRU ATCM is codified at title 13, California Code of Regulations (CCR), section 2477. The TRU ATCM established in-use performance standards for TRUs and TRU gen sets that were to be phased in commencing on December 31, 2008.

In March 2005, staff requested the U.S. Environmental Protection Agency (U.S. EPA) to grant authorization to ARB to adopt and enforce the TRU ATCM pursuant to Clean Air Act (CAA) section 209(e)(2). U.S. EPA granted California authorization on January 16, 2009. Because U.S. EPA's authorization was granted after the first compliance date, ARB delayed the enforcement of the TRU ATCM's in-use performance standards until January 2010.

Description of the Regulatory Action:

The Notice of Public Hearing to Consider Amendments to the TRU ATCM was published on September 29, 2010, and the Staff Report: Initial Statement of Reasons (Staff Report) for the amendments was also posted on ARB's rulemaking website on that date at: <http://www.arb.ca.gov/regact/2010/tru2010/tru2010.htm>. At its November 18, 2010 meeting, the Board adopted Resolution 10-39, which approved for adoption the amendments to the TRU ATCM.

The purpose of the amendments is to address three time-critical issues identified by staff during implementation of the rule which need resolution by the end of 2010. The adopted amendments affect owners of TRUs and TRU gen sets that operate in California that are equipped with MY 2003 engines, regardless of horsepower category, and MY 2004 engines in the less than 25 hp category. This includes all TRU and TRU gen set owners, whether based in California or out-of-state, that transport perishable goods using refrigerated trucks, trailers, shipping containers, and railcars within the State. Most TRUs are owned or operated by corporations, businesses, and individuals. There are a few local municipalities, school districts, and correctional institutions that operate TRUs that may be affected. These amendments also affect the owners of TRUs and TRU gen sets equipped with "flexibility engines" and also extend the applicability for new reporting requirements to TRU and TRU gen set original equipment manufacturers that directly or indirectly sell or offer for sale TRUs and TRU gen sets to the California market.

In-Use Emission Standards

The first amendment changes the in-use standards for MY 2003 TRU and TRU gen set engines in the 25 hp and greater power category from the ULETRU in-use standard to allow either the ULETRU standard or, as an option, the less stringent LETRU in-use standard. The compliance date for meeting one of these standards remains December 31, 2010. Seven years later, by the end of 2017, the MY 2003 engines that

are still remaining in service are required to meet ULETRU if the owner chose to meet the LETRU standard in 2010.

This amendment also changes the in-use standard for MY 2003 and MY 2004 engines in the less than 25 hp category from the ULETRU in-use standard to allow either the ULETRU standard or, as an option, the LETRU in-use standard. The compliance dates remain December 31, 2010, for MY 2003 engines and December 31, 2011, for MY 2004 engines, when the owner must choose to meet one of these standards. Seven years later, by the end of 2017, the MY 2003 engines that still remain in service are required to meet the ULETRU standard if the owner chose to meet the LETRU standard in 2010. By the end of 2018, the MY 2004 engines that still remain in service are also required to meet the ULETRU standard if the owner chose to meet the LETRU standard in 2011.

Flexibility Engines

As permitted under federal and State regulations, TRU and TRU gen set original equipment manufacturers (TRU OEMs) may install “flexibility engines” that meet an emissions standard tier that is no longer in effect for new engines at the time that the equipment is manufactured.¹ The use of these engines in TRUs has adversely impacted the operational life of TRUs under the TRU ATCM in that TRU owners must meet in-use performance standards seven years after the engine model year, not its manufacture date. The last year that a prior tier was in effect for new engine certification is typically one to two years before the manufacture date of the flexibility engine, resulting in the loss of up to several years of operational life. In most cases, TRU owners have not been aware of this loss of operational life for the TRU engines that they have purchased.

The second amendment clarifies the requirements for flexibility engines that are used in TRUs by original equipment manufacturers. Flexibility engines installed before the effective date of the amendments are provided a full seven years of operational life from the year of the engine’s manufacture before having to meet the in-use performance standard. Flexibility engines installed after the effective date of the amendments have a reduced operational life, given that compliance is based on the engine’s effective model year² – the last year that the flexibility engine’s tier standard was in effect – and ensures that the emission reductions intended under the original TRU ATCM will be achieved as intended. Compliance with the in-use standards is then required by the end of the seventh year after the effective model year of the flexibility engine.

Additionally, for flexibility engines installed after the effective date of the amendments, TRU manufacturers are also required to disclose to the end user at point-of-sale that the unit has a flexibility engine and that there is a loss of operational life associated with the

¹ Flexibility engines are new engines that are allowed under State and federal law to be certified to a lower emission standard than is otherwise in effect for new engines at the time of manufacture (title 40 Code of Federal Regulations, section 89.102 (40 CFR 89.102), 40 CFR 1039.625, 40 CFR 1068.265, and title 13, CCR section 2423(d) (CFR, 2010a; CFR, 2010b; CFR, 2010c; CCR, 2010)).

² The effective model year of the flexibility engine is the last year that the flexibility engine’s tier standard was in effect for new engine compliance

use of flexibility engines. They must also provide the end user with the date that the engine must meet the ULETRU in-use standard.

TRU Manufacturer Reporting

The third amendment requires TRU OEMS to report production information, including information on flexibility engines installed in TRUs. This reporting will ensure that manufacturers provide the data necessary to implement the adopted flexibility engine amendment and will allow ARB to consider improvements to the TRU registration process and to more accurately estimate TRU engine populations and emissions. TRU OEMs are required to periodically report data on each TRU and installed engine produced in future model years. TRU OEMs are also required to submit reports on TRU sales from previous years.

Comparable Federal Regulations: There are no federal regulations comparable to the TRU ATCM for in-use TRUs. Under federal Clean Air Act (CAA) section 213, U.S. EPA does not have the authority to adopt in-use standards for off-road (non-road) engines.³

Section 209(e)(1) of the CAA conclusively preempts states, including California, from adopting requirements for new off-road engines less than 175 hp that are used in farm or construction equipment. Under section 209(e)(2), California may adopt and enforce emission standards and other requirements for off-road engines and equipment not conclusively preempted by section 209(e)(1), so long as California applies for and receives authorization from the Administrator of U.S. EPA. TRU engines are not used in farm and construction equipment and are thus not preempted. California requested and received authorization from U.S. EPA for the initially adopted TRU ATCM in January 2009.⁴ Similarly, ARB will submit a request for confirmation that the amended regulations are within the scope of the existing waiver of federal preemption pursuant to section 209(e)(2) of the Clean Air Act.

³ The California term “off-road” and the federal term “nonroad” refer to the same sources and are used interchangeably.

⁴ 74 Fed Reg 3030 (January 16, 2009).