

Comments on the California Air Resources Board's Proposed Amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRUs)

Rypos, Inc. is pleased to provide comments in response to the California Air Resources Board's (ARB) proposed amendments to the Airborne Toxic Control Measure (ATCM) for transport refrigeration units (TRUs). We commend the agency for its continuing efforts to implement effective emission control measures for major sources of air pollution such as this category of engines.

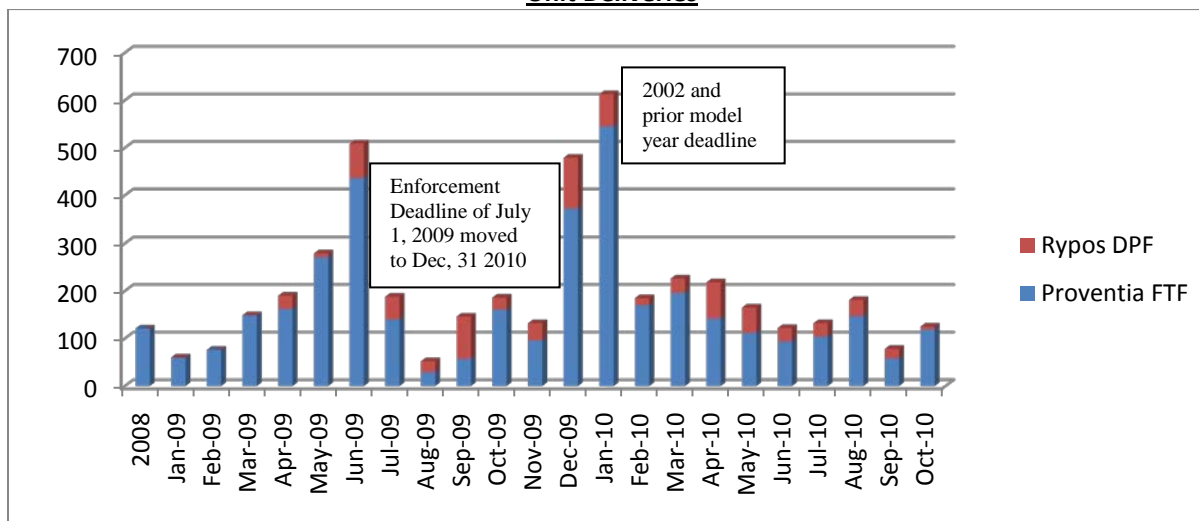
Rypos is the primary supplier of Low Emission TRU (LETRU) and Ultra Low Emissions TRU (ULETRU) VDEC solutions for retrofitting existing TRU's in the marketplace. We have verified an active diesel particulate filter (DPF) meeting the LETRU requirements for all TRU engine options and we distribute the Proventia LETRU system applicable to ThermoKing TRUs. Over the last three years we have sold over 4,500 systems in the marketplace and believe the TRU VDEC program to be one of the most successful retrofit programs in California. In 3 years, we have not had a single unit failure that resulted in the loss of any perishable goods, we have built a network of over 50 independent dealers and installers to sell and support the equipment in the field and we have trained operators, enforcement officials and maintenance personnel on the identification, use and upkeep of these cost effective units. These devices have resulted in removal of over 85 tons of particulate with minimal disruption to the overall transport of goods. This program is highly successful and should continue to adhere to the implementation schedule defined in the proposed modification. There is no reasonable justification for delaying implementation further.

Our comments will address several important mis-conceptions being communicated to the members and public by operators seeking to defer the TRU emission reduction program further. We will provide details of market adoption, reliability of the systems, availability of ULETRU products and the factors affecting the economics related to implementation of these systems. We will also provide data showing that the market behavior dictates the need for regulation and diligent enforcement to achieve the emission reduction goals of the regulation.

Market Adoption

Through October of 2010, Rypos has sold 4,625 LETRU retrofit devices. Through an extensive network of independent dealers as well as close collaboration with large fleet operators, these proven technologies have provided a lower cost alternative to engine rebuilds, engine repowers and TRU replacements. Sales of the systems have been highly cyclical and completely dependent on the implementation and enforcement of the regulation. Delays in enforcement or compliance date result in an immediate reduction in Units reaching the field.

Unit Deliveries



ARB announced delays in the enforcement of the regulations in July of 2009 resulted in an immediate drop in sales of over 80 percent. As you can see from the above graph, market adoption is heavily influenced by the regulatory deadlines and few if any operators elect to comply early. LETRU systems were available in mid-2008, however minimal compliance activity was experienced until 60 days prior to the actual compliance date. Delays in enforcement and compliance are not merited and have proven to be detrimental to the emission reduction goals of the regulations.

System Reliability

With every new technology and system, there are reliability improvements required as the systems gain experience in the field. The VDEC solutions provided by Rypos and Proventia are no exception, however the incident rates have been quite low when the large number of units in the field are considered. Of the 4,625 units in the field, less than 100 units or 2% have experienced problems in the field. The Proventia system in particular has performed very well. The electrically controlled DPF manufactured by Rypos has experienced some early failures related to high temperature operation in the Central Valley during the hot summer months. This issue has been isolated to a faulty pressure tube that leaks under very high ambient temperature conditions. This condition does not result in any increased emissions, and can be quickly fixed in the field by replacing the electronic control unit. While this issue has affected only 56 units to date, Rypos has elected to perform a reliability upgrade on 100% of the units at no cost to the operators. There have been reports that this unit is experiencing 100% failure rate. This is simply not true. The 100% replacement program is a free reliability upgrade. This orderly upgrade program minimizes the impact on the operator by allowing them to schedule the upgrades during their regular maintenance cycles and to switch out the unit before they experience significant system down time. In addition, we have positioned replacement units and parts in strategic locations to minimize any downtime to the operators should they experience an issue prior to upgrading. We expect this reliability improvement program to be completed over the next 4 months and are regularly reporting our progress to ARB staff.

ULETRU Availability

In addition to the supply of LETRU VDECs, we have been aggressively developing new ULETRU products. These units are currently available for immediate field trial and will complete verification once we have determined that the ARB regulations are stable and will be enforced per the current TRU ACTM regulations. These units are extensions of the current LETRU designs, with only the density of the filter media changing in order to achieve the higher efficiency required for ULETRU performance. They will incorporate all of the durability improvements identified during the LETRU program. In addition, there will be an upgrade program available that will allow LETRU operators to return units for remanufacture to the ULETRU level at approximately 50% of the cost of a new unit. These units will provide additional reductions in PM as well as reduce overall NO₂ emissions from the fleet. We would be happy to demonstrate these systems at any time for the ARB members as well as ARB staff.

Factors Affecting Implementation Economics

Rypos generally supports ARB's proposed amendments to the TRU ACTM in regards to changing the in-use performance standards for model year (MY) 2003 and certain 2004 TRU engines. We agree that the proposed amendments will reduce the cost of complying with the ACTM while still providing health protective emission limits for this subset of TRU engines. As noted by ARB in its Staff Report, the proposed amendments would add an interim retrofit option for this subset of TRU engines due to the limited availability of verified ULETRU retrofit devices for these engines. Specifically, owners could retrofit MY 2003 and some 2004 TRUs with LETRU (50% PM control) filters now for compliance with the December 2010 Low-Emission TRU requirements (December 2011 for some 2004 TRUs). TRUs that comply by using Level 2 retrofit devices would need to be upgraded to meet 85% emission control (Ultra-Low Emission TRU requirements) via retrofit or replacement in seven years. There is no need to move these implementation dates further. ULETRU devices are available for trial now and will be verified in the first half of next

year to support the December 31, 2011 implementation deadline. As evidenced by the prior years' buying habits, no meaningful adoption or installation of the units takes place until 60 days prior to the compliance date.

We would also like to confirm that there is sufficient supply of Level 2 filters, plus capacity at dealers and installers, to meet the demand over the next few months. We currently have over 1,500 LETRU units in our inventory available for immediate delivery. And, based on the expectation of accelerated ordering, have increased our production capacity to 1,000 units per month. Overall, since 2008, these LETRU retrofits have been introduced into the California marketplace in a timely manner with minimal disruption to fleet schedules. In addition, we have made significant investments in ULETRU product development that will bring additional verified product to fleets starting in 2011 to enable a smooth transition to ULETRU compliance.

In supporting the proposed amendments, we believe any further delays would be unnecessary and counterproductive to ARB's mission of reducing particulate matter emissions to protect public health and the environment. We have invested and continue to invest significant resources in developing and commercializing emission control technologies for the whole range of in-use diesel engines currently operating in California and the rest of the U.S. We rely on regulatory stability in order to continue making the necessary investments to meet the regulatory and market requirements in time for implementation. Given the effectiveness of diesel particulate filter systems in reducing PM emissions, ARB should consider maximizing the use of these technologies wherever possible to help the agency meet its regulatory obligations (e.g., the ATCMs under ARB's Diesel Risk Reduction Plan, as well as ARB's State Strategy for meeting California's State Implementation Plan).

The success of ARB's efforts, however, to clean up these existing diesel vehicles and equipment operating within the state depends on the agency having adequate staff to enforce the ACTM requirements. Going forward, we urge the ARB Board to continue to provide sufficient resources to the enforcement program to help maintain a level economic playing field for our customers. By our estimates, less than 50% of the TRUs operating in or travelling into California are compliant at this time. Further enforcement is required to ensure that all operators are treated equally.

Rypos and Proventia look forward to continuing to work with ARB and its stakeholders in implementing the control measures under the agency's Diesel Risk Reduction Plan.

For further clarification or questions please contact:

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