

NAECCewsletter

Association for Emissions Control by Catalyst

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Affiliated to CEFIC

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INTERNATIONAL REGULATORY DEVELOPMENTS

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EUROPE

1. EU to monitor Carbon Dioxide Emissions from Cars

The European Union has agreed to a scheme to monitor car manufacturers' pledges to reduce carbon dioxide (CO₂) emissions. This will be the first monitoring scheme for CO₂ emissions in the EU. The EU said in a statement after a meeting of the conciliation committee of the European Parliament and representatives of EU governments that it will be used to check compliance with the voluntary agreement with the car industry. The text is expected to be ratified by the Parliament and the Council of Ministers in the coming weeks.

Passenger cars account for about half of total CO₂ emissions in the transport sector and make up around 12 percent of total emissions of CO₂ in the EU.

2. Czech Republic to ban Leaded Petrol in January 2001

The Czech government has approved a decree prohibiting the sale of leaded gasoline beginning 1 January 2001. The decree was initiated by the Ministries of Environment and Industry and was issued on 10 November 1999.

The Czech decree satisfies both domestic and international goals. A chief reason for approving the decree is to decrease auto emissions. Exhaust fumes are a problem especially in the country's big cities, whose downtown sections occasionally are closed to motor vehicles in winter months due to extreme air pollution caused by a combination of vehicle fumes and emissions from coal-fired heating facilities.

Another important purpose of the decree is to comply with the requirements of EU Directive EC/98/70 that bans marketing of

leaded gasoline from the beginning of 2000. The Czech Republic has applied for EU membership, and harmonizing its existing laws with EU legislation is a prerequisite for membership. On 20 December 1999, EU Environment Commissioner Margot Wallström announced that Greece, Italy and Spain had received a two-year derogation, or transition period, from the ban.

3. Italy to offer Incentives to switch to Unleaded Fuel

The Italian Environment Minister has announced incentives to encourage the scrapping of cars using leaded petrol by January 2002. The Italian government said it would offer 200,000 lire (~€100) per car to pay for scrapping costs of vehicles registered before 1984. Another incentive of 800,000 lire per car will encourage conversions to methane or LPG of some 83,000 cars. The incentives should be approved in June but the government is considering an extension through next year.

4. UK Budget introduces Incentives for Ultra Low Sulphur Petrol

The UK budget, announced in March, highlights UK government thinking for the future regarding the use of fiscal measures and incentives to promote low emissions. Key provisions include:

- 1 pence/litre tax reduction for ultra low sulphur petrol from 1 October 2000.
- A new banding system for vehicle excise duty for cars based on CO₂ emissions.
- For the lowest duty cars must emit no more than 165 g/km of CO₂ in 2002/03, 155 g/km in 2003/04 and 145 g/km in 2004/05. This approaches the industry target of 140 g/km in 2008.

- Diesel cars are given a supplement of 3% of the car's price because their CO₂ advantage is offset by higher emissions of the "two local air pollutants of most concern" - NO_x and particulate matter.
- UK government notes that "recent developments in diesel aftertreatment technologies have the potential to offer significant emission reductions... (so)... some diesels cars could have comparable emissions to...the cleanest petrol cars." It is proposed that the diesel supplement will be waived for these cars to enable them to pay the lowest rate of duty.

NORTH AMERICA

5. CARB cuts Emissions from Transit Buses

The California Air Resources Board (CARB) has adopted a regulation that will further reduce air pollution from the state's transit buses, and require some fleet operators to start using zero-emission buses (ZEBs) in three years. The regulation, which in 2002 starts its phase-in, affects about 8,500 buses at approximately 75 California transit agencies. It moves forward in several steps over the next ten years, requiring cleaner engines, cleaner diesel fuel, retrofits to reduce exhaust particulate matter (PM) emissions from older diesel buses, use of ZEBs and reduced exhaust PM and nitrogen oxides (NO_x) from new diesel engines.

The regulation allows transit agencies the flexibility of choosing between either a diesel or alternative fuel path to lower air emissions. They may choose to use alternative fuels such as compressed or liquefied natural gas, propane, methanol, electricity, fuel cells or other advanced technology. Continued use of diesel brings

with it a requirement to use low sulphur (15 ppm) diesel fuel beginning 1 July 2002, and to cut emissions from new diesel buses by another 75 percent beginning in 2004. An even lower NO_x standard applies to both diesel and alternative fuel bus engines sold to California transit agencies starting in 2007.

In addition, for both diesel and alternative fuel paths, a NO_x fleet average of 4.8 grams per brake-horsepower hour (g/bhp-hr) begins in 2002, which will require some transit agencies to retire their oldest, highest polluting buses. A requirement to retrofit existing buses with traps or other devices to reduce PM starts in 2003.

CARB staff calculates that the new transit bus rules, combined with normal fleet turnover, will bring reductions of 7 tons/day of NO_x and 12 tons/year of PM by 2020.

6. US EPA tightens Standards for Small Engines

The U.S. Environmental Protection Agency has ordered major pollution cuts for lawnmowers, weed trimmers, chainsaws and other small engine-powered equipment used by home owners, saying the new standards will slice smog emissions by 70 percent by 2007. The 20 million small engine devices bought by Americans annually contribute a relatively small amount of hydrocarbon emissions but rank as the largest single contributor to so-called "non-road" emissions according to EPA.

The cuts, to be phased in over the next seven years, will reduce the emissions by 350,000 tons each year from 2007 while increasing fuel efficiency by 30 percent.

7. STAPPA/ALAPCO issues Report on Cancer Risk from Diesel Particulate

Last year's South Coast Air Quality Management District (SCAQMD) draft final report, the *Multiple Air Toxics Exposure Study in the South Coast Air Basin*, included an analysis of the cancer risk in the region from exposure to diesel particulate and concluded that mobile sources were responsible for approximately 90 percent of the cancer risk in the area and that 70 percent of the total cancer risk was attributable to diesel particulate.

The State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) has now sought to extend the evaluation of cancer risk from diesel particulate to other cities across the country and to estimate how many cancers nationwide are the result of exposure to diesel particulate. STAPPA and ALAPCO's find that soot from diesel engines is responsible for 125,000 cancers in the United States.

The U.S. Environmental Protection Agency (EPA) is currently preparing a proposal, for release this spring, for more stringent emission standards for on-road heavy-duty diesel vehicles and substantial cuts in levels of sulphur in diesel fuel used in on-road applications. In addition, the agency is contemplating its course of action for emission and fuel quality standards for non-road heavy-duty diesel engines, such as construction and agricultural equipment. STAPPA and ALAPCO have strongly urged EPA to:

- Set more stringent nitrogen oxide (NO_x) and particulate matter (PM) emission standards for 100% of the

fleet in 2007 model year for on-road heavy-duty engines. NO_x standards to be no more than 0.2 g/bhp-hr and PM standards to be no more than 0.01 g/bhp-hr and based on the most advanced technologies possible

- Set more stringent emission standards for non-road heavy-duty diesel engines, equivalent to those for on-road heavy-duty diesels and in the same time frame
- Sharply reduce sulphur in diesel fuel used in on-road and non-road diesel engines to ultra low levels from mid 2006, with an interim nationwide sulphur cap no higher than 30 ppm, by 2004.

8. New Study links high traffic streets to Childhood Leukaemia and other Cancers

The results of a new study conducted in the rapidly expanding Denver metropolitan area indicates children living near heavily travelled streets or highways are at significantly greater risk of developing cancer, including childhood leukaemia.

The researchers found a correlation between high volumes of traffic on streets or highways near homes where incidences of childhood cancer previously had been documented. The study by Radian International, Denver, University of Colorado, Boulder and Electric Power Research Institute, Palo Alto was funded by EPRI.

The new study showed that homes adjacent to street corridors carrying 20,000 or more vehicles per day had roughly a 6-fold increase in risk for children contracting cancer, including childhood leukaemia. Motor vehicles are a significant source of air

pollution emissions, including benzene and other organic compounds. Occupational exposure to elevated concentrations of benzene is a known cause of leukaemia in adults.

9. New York striving for the cleanest Buses in the World

New York's governor has announced a plan to ensure that the Metropolitan Transportation Authority has the cleanest bus fleet in the world by significantly stepping up the purchase of new clean-fuel buses and retrofitting existing diesel buses to dramatically reduce pollution.

\$250 million will be available for an enhanced Clean Fuel Bus programme and the Department of Environmental Conservation will work with MTA and the environmental community to develop new emissions performance standards for all MTA buses to ensure they meet or exceed those achieved by Compressed Natural Gas (CNG) buses.

The plan provides for the purchase of 550 new clean fuel buses, requires conversion of all existing diesel buses to clean technology and calls for construction of a new heavy-duty testing laboratory to fully test all developing clean fuel technologies.

This is anticipated to result in more than 1,000 new clean fuel buses in service and the retrofitting of all other buses with particulate traps with prompt conversion to the use of ultra low sulphur fuel and will allow the entire MTA bus fleet to reduce emissions city-wide within three years.

10. New Studies reinforce link between Particulates and Premature Death

Even relatively low levels of particulates raise the risk of death and serious illness

according to a study that examined the link between dirty air and health in 90 of the largest U.S. cities. The study, released at the annual meeting of the Health Effects Institute and known as the National Morbidity, Mortality and Air Pollution study, found that for every increase of 10 micrograms per cubic meter of particulates in the air, the risk of death rose by an average of 0.4% nationally.

The study found that the risk of death at higher particulate levels went up most dramatically in the Northeast and in southern California. The authors suspect that high levels of other kinds of air pollution in those regions are a factor in this risk increase.

ASIA-PACIFIC REGION

11. Japan continues aggressive push to clean up Diesels

The Tokyo Metropolitan Government announced on 18 February draft regulations for the mandatory installation of Diesel Particulate Filters (DPF) for all diesel vehicles that run in Tokyo area. The government proposed to amend its anti pollution law by the end of 2000 to require particulate trap retrofitting of all existing diesel engines. The new regulation will be effective on 1 April 2001. There will be a 2 year preparation time for retrofit, so the first group under the regulation is required to be equipped with DPFs after April 2003. The requirements will be phased in on a step-by-step basis but 100% of the vehicles are to be equipped with DPFs by April of 2006.

Approximately 190,000 diesel passenger cars and 460,000 commercial vehicles are registered in Tokyo. In addition to those, about 240,000 diesel vehicles come into

Tokyo from other areas each day.

On 22 February, the Director-General of the Environment Agency, made requests to Petroleum Association of Japan (PAJ) and JAMA (Japan Automotive Manufacturers Association) concerning the emission from diesel fuel vehicles. The chairman of PAJ was requested that technological developments for lowering the sulphur content should be promoted and the chairman of JAMA was asked to promote technological developments for abating the exhaust emissions from diesel vehicles.

On 16 March JAMA said that regarding new cars they would promote the development of vehicles which pass the 2007 diesel exhaust emission limit values and provide diesel vehicles with regenerating DPFs or any other PM reducing technology in 2003-2004. For in-use cars they would develop technology for reducing PM considering user needs. In particular, in large cities, the installation of DPFs, substitution to gasoline fuel, LPG or CNG fuel vehicles.

PAJ responded that with regard to the 2007 regulation, they would progressively provide low sulphur diesel fuel and for vehicles with regenerating DPFs, would provide a grade of low sulphur diesel fuel earlier than 2007.

The Tokyo Municipal government announced it would push the petroleum industry to provide low sulphur fuel for city buses from 2001.

12. Australia to phase out Leaded Petrol by January 2002

Australia will phase out leaded petrol nation-wide by 1 January 2002, which would significantly improve the country's air pollution levels, according to an announcement by their Environment Minister.

There are around 2.5 million cars built before 1986 that are designed to run on leaded petrol in Australia, but the government has negotiated with oil companies for the national introduction of lead replacement petrol (LRP). LRP will have the same octane rating as leaded petrol, with an anti valve seat recession additive providing the lubricating properties of lead. Western Australia has already introduced LRP and prices are similar to those for leaded petrol.

13. Taiwan EPA phases out Leaded Petrol Vehicles

In light of the prohibition on the sale of leaded gasoline in Taiwan, from the beginning of this year, the China Petroleum Corporation made available a lead-substitute fuel additive in October 1999. However, the EPA is urging owners to replace vehicles that require leaded gasoline as soon as possible due to their higher emissions levels.

14. South Korea to tighten Vehicle Standards

The Ministry of Environment is in process of establishing new emission standards for 2002-2004. Euro 3 standards will be applied to heavy-duty diesel trucks and buses, and US LEV standards for gasoline passenger cars. Standards will be fixed by the middle of this year.

15. Philippines accelerates Phase-out of Leaded Petrol

Philippine oil companies signed a memorandum of agreement with the government to stop the sale of leaded petrol by April 2000, earlier than the originally scheduled January 2001. Unleaded petrol was first sold in the Philippines in February 1994.

CENTRAL AMERICA

16. Jamaica eliminates Leaded Petrol

In early April, sales of leaded petrol on the Caribbean Island of Jamaica came to an end.

17. Forthcoming Conferences

"Particles and Air Quality"

17 May 2000, Royal Society of Arts, London

Details from: National Society for Clean Air, Tel. +44 1273 326313, Fax. +44 1273 735802, Email sales@nsca.org.uk

A conference on health impacts of fine particles, sources, distribution and air quality management.

"F-Cells 2000"

23-26 May 2000, Palm Springs, California

Details from: IQPC, Tel. +1 973 256 0211, Fax. +1 973 256 0205

A conference and workshop on fuel cell commercialisation covering automotive and power generation applications.

"World Bus and Clean Fuel Summit"

31 May – 2 June 2000, Los Angeles, California

Details from: IQPC, Tel. +1 973 256 0211, Fax. +1 973 256 0205

A conference on all aspects of clean technologies for buses.

"Tomorrow's power train – soul of the vehicle or simply a sub-system"

7-8 September 2000, Graz, Austria

Details on AVL homepage
www.avl.com/engine_environment

"21st Century Emissions Technology"

4-6 December 2000, IMechE, London

Details from: IMechE, Tel. +44 20 7975 1312, Fax. +44 20 7222 9881, Email s_love@imeche.org.uk

Includes fuels and emission control technology.