

Locomotive Emissions Reduction and Mitigation Program

Is this legislation needed to meet state and federal clean air mandates?

- ▶ Yes. Continued emissions from mobile sources, including trains, may prevent this region from achieving clean air standards by the legally mandated federal deadline of 2010. This legislation will help ensure implementation of control strategies to mitigate emissions from locomotives and establish other pollutant mitigation programs.
- ▶ The South Coast Air Basin is the only “extreme” non-attainment area designated in the country for ozone, with the worst air pollution.
- ▶ Over 75 percent of the pollutant emissions in the region come from mobile sources, including trains, which AQMD has limited authority to regulate.

Why is the AQMD focusing on railroads?

- ▶ Rail traffic in the South Coast Air Basin is projected to almost double in the next twenty years. Locomotive operations are one of the largest sources of air pollution in the South Coast Air Basin.
- ▶ The NO_x pollution emitted from railroad operations in the South Coast Air Basin exceed the emissions from 100 of the largest oil refineries, power plants, chemical plants and other industrial facilities **combined**.
- ▶ Health studies have linked particulate pollution to lung cancer. The health and welfare of people who live and work in the vicinity of rail traffic can be impacted.
- ▶ In order to attain state and federal standards for ozone and PM, it is necessary that emissions from locomotives be controlled or mitigated by the federal government, or if necessary, by state or local agencies using authority available to them.

What has U.S. EPA and CARB done to achieve emissions reductions from locomotives?

- ▶ In 1998, the Environmental Protection Agency (EPA) adopted national standards for new and re-manufactured locomotives beginning in 2000. In 1998, the California Air Resources Board entered into an MOU with Burlington Northern and Santa Fe Railroad Company and Union Pacific Railroad, under which the railroads agreed to utilize locomotives in the South Coast Air Basin that meet certain emission limitations by 2010. The emission reductions that will be achieved by locomotives under existing federal regulations and the 1998 MOU fall short of what is

required to achieve clean air in a timely manner and is less than the effort that has occurred at many other pollution sources.

- ▶ Unless and until the federal EPA adopts regulations requiring locomotives in the South Coast Air Basin to achieve all feasible emission reductions as necessary to achieve federal clean air standards, the AQMD should be authorized to adopt a locomotive emission reduction and/or mitigation program that will address the health and environmental harms resulting from those emissions.

Is retrofit technology available and cost effective?

- ▶ Yes. The AQMD, through its Technology Advancement Office and also through the statewide Carl Moyer Program, has funded research and development of retrofit technology for locomotive engines. Currently there are retrofit kits available for some older, higher polluting engines. There is also on-going development of hybrid electric locomotives.
- ▶ It is estimated that locomotives in the South Coast Air Basin emit 36 tons of NO_x per day. The estimated cost of emission reductions is \$4,000 per ton of NO_x emissions reduced, or less. More expensive controls have been implemented for many other pollution sources, making locomotive pollution controls economically efficient.

Are there other alternatives to locomotive emission reductions?

- ▶ A revenue-neutral mitigation fee program would allow a railroad to pay a fee which would use the funds to reduce emissions from other sources in the vicinity of railroads. The fee could also be used to reduce locomotive or associated emissions. For example the lack of grade separations between rail lines and surface streets in the South Coast Basin contributes to increased emissions resulting from idling trains and traffic in the Alameda Corridor area. Such funds could be used to establish programs/efforts to reduce these emissions.

What public process will be used to disburse the funds and what kind of projects will be considered?

- ▶ AQMD has the technical expertise and experience to implement a mitigation fee program to implement retrofit technologies that will reduce ozone and PM emissions in the region and produce positive public health benefits.
- ▶ Projects considered will be prioritized in terms of cost effectiveness expressed in \$/tons of emissions reduced and overall emissions reduced. Also, programs in low-income communities that are the most impacted

will be given first consideration for a significant portion of the funding. The AQMD Governing Board will make all decisions in a public forum, with consideration for public input.