

# **Phase II of the Colorado Off-Road//On-Road Diesel Emissions Study**

Lisa Silva  
State of Colorado  
Planning and Policy  
Air Pollution Control  
lisa.silva@state.co.us

## **Background**

The Air Pollution Control Division hypothesizes that existing methods for estimating construction industry activity and diesel exhaust emissions somehow over-estimate the totals. It appears unlikely to some that total off-road diesel PM emission estimates are 2-5 times as high as on-road DPM estimates, as reported in the EPA's preliminary 1996 National Air Toxics Assessment results. The apparent over-estimates may derive from assumptions regarding the correlation of construction vehicle activity to construction dollars and population.

Much construction—especially renovation—occurs in areas that do not require heavy-duty diesel equipment, i.e., where the land is already graded and/or a structure already exists. In addition, it is observed that cranes, graders and diggers operate for relatively short periods of time, unlike on-road trucks and buses, which operate 5-7 days per week, 8-24 hours per day on a year-round basis.

The Colorado Air Pollution Control Division began background research (Phase I) of the Off-Road Diesel PM Characterization & Construction Activity project in October of this year, and anticipates completing this phase by February 2002. A report on information-to-date should be available at that time. The Phase I report is to provide information regarding:

- (1) Currently accepted methods of calculating construction activity (EPA Non-road Emission Factor Model and others) related to diesel emissions;
- (2) Identification of any alternative methods of characterizing these emissions;
- (3) Off-road (tax-exempt) diesel fuel usage in the state;
- (4) Broad-brush construction activity data provided by construction industry associations and the U.S. Census Bureau;
- (5) Identification of information gaps.

## **Phase II**

Based on Phase I findings, the APCD will more fully develop and finalize a work plan for Phase II of the study. It is anticipated that Phase II may include the following ten steps:

- (1) Finalization of Phase II Work Plan
- (2) Development of construction firm survey questionnaire
- (3) Research and tally construction permits issued in 63 Colorado counties 1995-2000
- (4) Get tallies for air quality permits issued for large development projects (> 25 acres or > 6 months) 1995-2000
- (5) Survey by phone and site visit a representative number of Colorado construction projects/firms regarding machinery types and activity levels

