May 2, 2006
Contact – Amy Hillman

Workgroup Recommendations and Other Potential Control Measures
Diesel Initiatives Workgroup

DI002 – Non-Road Vehicle Idling

Control Measure:	**Benefits / Costs**
Extend idling requirements to non-road vehicles, and include outreach and education for construction operators; promote non-road idle reduction technologies; and institute idling restrictions for Ground Support Equipment (GSE) at airports.	
Extend idling requirements to non-road vehicles: Currently, New Jersey's idling limit is enforced only on on-road vehicles. It is recommended that a change in the rule be made to clearly extend the idling limit to non-road vehicles as well. Due to the extremely high idle rates of non-road vehicles, and in particular that of non-road construction vehicles and airport ground support equipment, an extension of the idling requirement to non-road vehicles is an effective and inexpensive way to decrease these emissions. Non-road construction vehicles account for 2674 tons per year of PM2.5, a large contribution to state PM2.5 totals, and 25,932 tons per year of NOx. As a subset of this measure, the idle reduction measures below will help further the goal of increased awareness of this problem, and a decrease in emissions from this sector.	Reduction in fuel costs. Reduced engine maintenance costs. Increased equipment life. Decreased noise complaints. Cost of technology would be recouped within the life of the equipment, probably sooner in many cases, providing a net cost savings for equipment owner. If 20% reduction in idling is achievable, 225 tpy NOx and 18 tpy PM2.5 reduction would result.
Outreach and education for construction operators: Construction vehicles have reported idle rates of up to 90%, and a driver training program is an important tool to begin to educate construction vehicle operators. This training could be incorporated into any type of formal training currently required for these operators. Like onroad idling, nonroad idling is more of a habit than a mechanical necessity. Outreach is an inexpensive way to educate construction vehicle operators, supervisors and construction companies.	

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Promotion of idle reduction technologies: Examples of Idle reduction technologies include automatic shut-off devices (included on some new non-road equipment). These are readily available technologies that will reduce PM and save fuel by shutting the engine off when not in use. The cost of this technology may be initially significant, but would be mitigated by fuel savings and a reduction in maintenance costs over the life of the equipment. Examples of construction projects that have employed idle-reduction technology successfully include the Big Dig in Boston (50-70 vehicles), the Croton, NY Filter project (30 vehicles retrofitted), and any vehicle publicly owned or contracted to do construction in NY City pursuant to Local Law 77/2003.	
Instituting idling restrictions for Ground Support Equipment (GSE) at airports: It may be possible to apply the current 3-minute idling law to the approx. 2000 non-road GSEs, which emit 1126 tons per year NOx and 89 tons per year PM2.5. This would result in fuel savings and reduced engine wear and is a low cost strategy. There may be times when the restrictions would not apply, such as harsh weather conditions. Implementing such a strategy may require a regulatory change, and would be accompanied by outreach to the regulated community. It could also be incorporated into the Port Authority's leases and enforced as a lease requirement.	

SOURCES

1. www.epa.gov/otaq/retrofit/exbigdig.htm

2. 2002 New Jersey Emissions Inventory