

# Air Quality Break-out Session

Mother Clara Hale Depot  
Charrette

September 20, 2008

# Issues

- Mobile Sources - Bus emissions due to operation of the new bus depot (idling buses & buses in-use)
- Stationary Sources – Emissions from building operations (emissions from HVAC & on site bus activities, garage emissions)
- Demolition and Construction Issues – Asbestos removal and other issues

# Issues

- Continuous Monitoring – Quality control and assurance of operation of bus depot
- Access Number – Information regarding the bus depot operation (contact with a “REAL PERSON!!!”)
- Continuous communication between the MTA and the Community

# Strategies

- Hybrid Buses
- Increasing size and efficiency of the facility: no “idling” buses parked outside; no buses queuing up for extended period to get into the depot; allow the employees to park inside the facility
- NYCT Engine & Emission Control Policy (Sept. 2008) mandates that no idling should occur on NYCT property at all times and is limited within the facility to 5 minutes per hour for engine starting when temperatures are below 40° F.

# Strategies

- All diesel powered buses will use Ultra Low Sulfur Diesel (USDL), mandated by EPA since 2007, which reduce particulate emissions (PM-10 and PM-2.5) by **20%**.
- All diesel buses within the NYCT fleet have been retrofitted with Diesel Particulate Filters, which reduce particulate emissions by **90%**.
- Enhanced public transportation service : reducing the share of other modes of transportation such as passenger cars that contribute to traffic congestion, slow operating speeds which translate into higher vehicular emissions

# Strategies

- Filters on boilers and other exhaust points, as practicable
- Elimination of the peak load shaving program (i.e., use of emergency generation during summer peak demand to decrease likelihood of utility blackouts) from the proposed depot
- More efficient design of rooftop HVAC equipment: stack height, number & location of heat recovery units; use series of energy efficient Heat Recovery Ventilation Units further reducing the energy load and corresponding HVAC requirements and resulting PM and NOx emissions.

# Strategies

- Increased thermal insulation rating of building envelop and roof to save energy resulting in decreased emissions.
- Use low NOx burners for clean burning natural gas powered boiler.
- NYCT has committed to cap NOx emissions reducing ground level ozone concentrations.

# Strategies

- LEED energy optimization goal results in overall emissions reduction.
- LEED Refrigerant Management prerequisite requirement will serve to reduce ozone depletion.



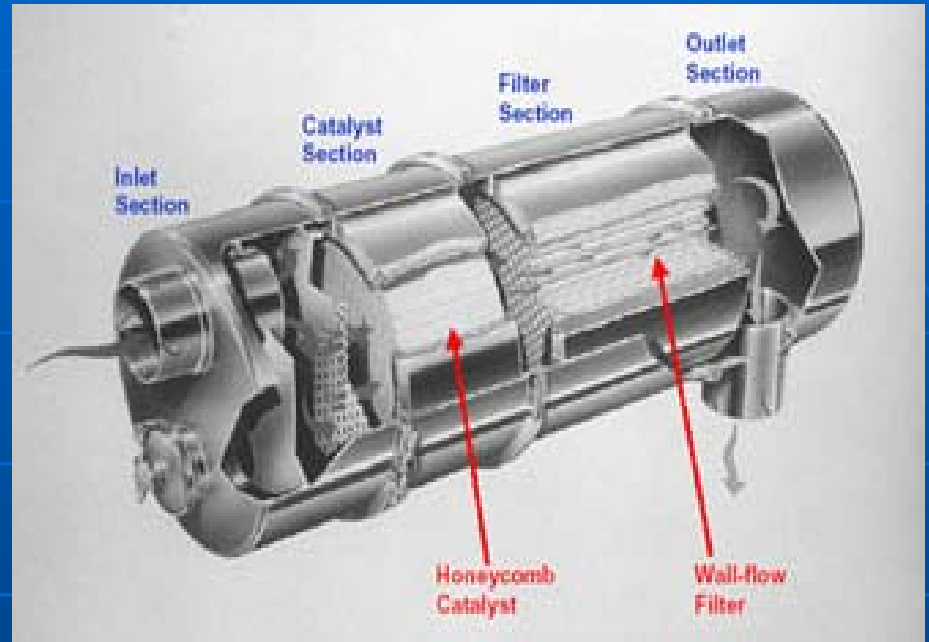
# Hybrid Buses



Contributes to the Reduction of the Following Issues:

- NOx and particulate emissions from bus operations

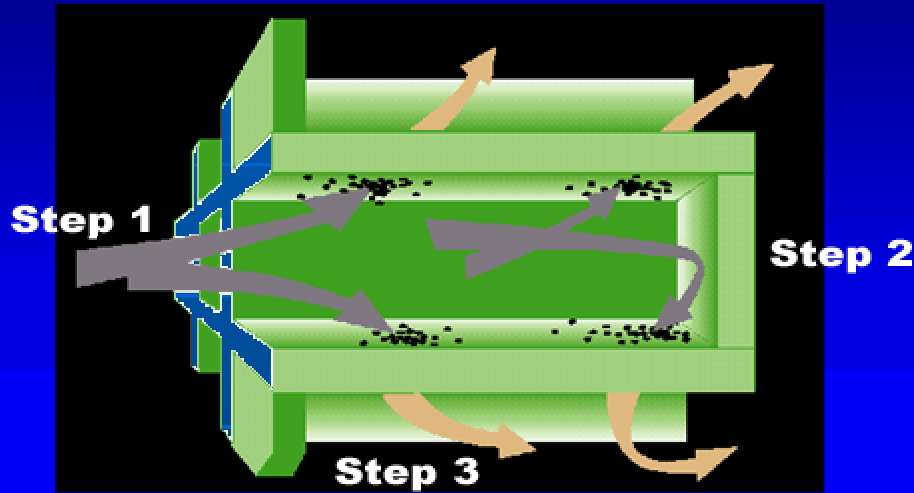
# Diesel Oxidation Catalyst



Contributes to the Reduction of the Following Issues:

- NO<sub>x</sub> emissions from bus operations

## Diesel Particulate Filter

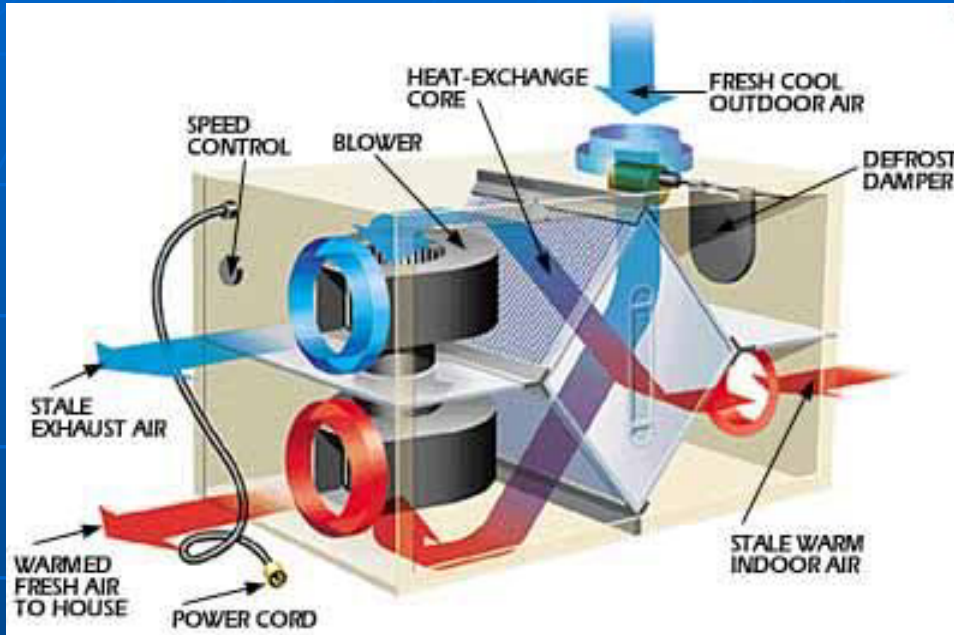


## Diesel Particulate Filters

Contributes to the Reduction of the Following Issues:

- particulate emissions from bus operations

# Heat Recovery Ventilation Units



Contributes to the Reduction of the Following Issues:

- Emissions generated from operating HVAC equipment



# LEED Certification

Contributes to the Reduction of the Following Issues:

- Emissions generated from energy consumption
- Emissions from refrigerants contributing to ozone depletion