LOWER MANHATTAN CONSTRUCTION COMMAND CENTER
Facilitate, Mitigate, Communicate

Technology (Approximate Installation Time)	Description	Approximate Percent Emission Reduction*			
		PM	NOx	HC	CO
Diesel Particulate Filters (DPFs) (4-8 hrs)	DPFs are honeycomb or mesh devices that filter, or trap PM from the exhaust. Exhaust temperature, duty cycle and fuel type are critical elements to evaluate prior to selecting a DPF. Cost of filter changing can range from $20-600 annually.	90	-	60-90	60-90
Diesel Oxidation Catalysts (DOC)s (1-4 hrs)	DOCs reduce harmful pollutants by catalytically converting them into water and carbon dioxide. Inside the canister is a honeycomb substrate that is coated with a small amount of precious metals where the reaction occurs.	20-50	-	60-90	60-90
Lean NOx Catalyst (LNC) (LNC/DPF up to 16 hrs)	LNCs are catalysts that promote the reduction of NOx using hydrocarbons as a reducing agent. Often an LNC is combined with a DPF.	90	25	60-90	60-90
Exhaust Gas Recirculation (EGR) (EGR/DPF up to 16 hrs)	EGR technology recirculates a portion of engine exhaust back into the engine. This recirculation cools peak combustion temperatures and dilutes the oxygen content of the fuel-air mixture, thus reducing NOx. EGR can be coupled with a DPF to reduce even more PM.	90	50 or 60-90 with DPF	60-90	60-90
Selective Catalytic Reduction (SCR) (Up to 8 hrs)	SCR technology injects urea (or some form of ammonia) into the exhaust stream which reacts over a catalyst to reduce NOx emissions.	30-50	90	50-90	50-90
Closed Crankcase Ventilation System (CCV)	CCV systems are designed to return crankcase blow-by gases to the engine intake for subsequent combustion during the engine combustion process. Replace filter every 25,000 miles. Filters cost between $25 - $50.	10-25	-	30-40	30-35

*Approximate percentage of emission reduction of the following pollutants:
PM – Particulate Matter HC – Hydrocarbons
NOx – Nitrogen Oxides CO – Carbon Monoxide