

Possible scenarios for exposure assessment

I premise by saying that this is not my area of expertise. My idea is to select 2-3 different types of vehicles that would likely be found in street canyons (construction equipment, delivery truck) and a school bus. I would choose an engine model and year that is somewhat typical of the types that would be retrofitted. The most important measurements would be in the immediate vicinity of the vehicles, but that may be difficult. For example, could you test the vehicle on a portable dynamometer placed in a room and measure the room air after a certain period of operation? From that you could do some modeling. This condition would not account for atmospheric transformation, but would allow one to measure any build up of NO₂. If the vehicles had to be driven around, I would measure the concentration in the back of the bus with the windows open and then do a "chase" type of measurement for all three types of vehicles. I would just focus on NO_x, NO, and NO₂ and would try to operate the vehicles under a best-case scenario and under a worst-case scenario.