

CORRESPONDENCE

Comments on "Speciated Measurements and Calculated Reactivities of Vehicle Exhaust Emissions from Conventional and Reformulated Gasolines"

SIR: Hoekman showed in his recent article (1) that fuel reformulation has an almost undetectable effect on the reactivity of motor vehicle emissions, despite its large cost and negative impact on fleet gas mileage. He studied a fleet of 19 vehicles of average age 10 years [similar in most respects to the on-road Los Angeles fleet (2)]. The baseline total reactivity weighted hydrocarbon emissions from the fleet of 19 vehicles was 52.6 g of ozone/mi and 50.1 g of ozone/mi when the reformulated fuel was used. Half the emissions came from two noncatalyst vehicles. Fifty percent of the emissions from 10% of the fleet has been observed in most studies of on-road emissions in the United States (3).

If the two vehicles (1971 Plymouth Duster and 1978 Datsun 510) were identified and repaired to the average emissions of the other two comparable noncatalyst vehicles

(1970 Chevrolet Custom pickup and 1978 Honda Accord at 4 g of ozone/mi), the emissions reduction would total over 20 g of ozone/mi. Ten times the improvement observed from fuel reformulation could be obtained by identification and repair of 10% of the fleet. The conclusion of this study should be that identification and repair of gross polluting vehicles is likely to be much more cost effective than fuel reformulation.

Literature Cited

- (1) Hoekman, S. K. *Environ. Sci. Technol.* 1992, 26, 1206-1216.
- (2) Stedman, D. H.; Bishop, G. A.; Peterson, J. E.; Guenther, P. L. *On-Road CO Remote Sensing in the Los Angeles Basin*; Final Report A932-189; California Air Resources Board, Sacramento, CA, Aug 1991.
- (3) Peterson, J. E.; Stedman, D. H. *CHEMTECH* 1992, 22, 47-53.

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