

Environmental Protection Agency

§ 80.55

P(nominal) = the performance that would have been achieved by the test fuel defined in paragraph (a)(1) of this section according to the complex model (as described in paragraph (d)(1) of this section).

(ii) Adjustment factors shall be calculated for each pollutant and for each emitter class.

(3) Multiply the measured emissions from each vehicle by the corresponding adjustment factor for the appropriate addition or extension fuel, pollutant, and emitter class. Use the resulting adjusted emissions to conduct all modeling and emission effect estimation activities described in § 80.48.

(e) All fuels included in vehicle testing programs shall have an octane number of 87.5, as measured by the (R+M)/2 method following the ASTM D4814 procedures, to within the measurement and blending tolerances specified in paragraph (c) of this section.

(f) A single batch of each addition or extension fuel shall be used throughout the duration of the testing program.

[59 FR 7813, Feb. 16, 1994, as amended at 59 FR 36962, July 20, 1994]

§ 80.50 General test procedure requirements for augmentation of the emission models.

(a) The following test procedure must be followed when testing to augment the complex emission model described at § 80.45.

(1) VOC, NO_x, CO, and CO₂ emissions must be measured for all fuel-vehicle combinations tested.

(2) Toxics emissions must be measured when testing the extension fuels per the requirements of § 80.49(a) or when testing addition fuels 1, 2, and 3 per the requirements of § 80.49(a).

(3) When testing addition fuels 4, 5, 6, and 7 per the requirements of § 80.49(a), toxics emissions need not be measured. However, EPA reserves the right to require the inclusion of such measurements in the test program prior to approval of the test program if evidence exists which suggests that adverse interactive effects of the parameter in question may exist for toxics emissions.

(b) The general requirements per 40 CFR 86.130-96 shall be met.

(c) The engine starting and restarting procedures per 40 CFR 86.136-90 shall be followed.

(d) Except as provided for at § 80.59, general preparation of vehicles being tested shall follow procedures detailed in 40 CFR 86.130-96 and 86.131-96.

§ 80.51 Vehicle test procedures.

The test sequence applicable when augmenting the emission models through vehicle testing is as follows:

(a) Prepare vehicles per § 80.50.

(b) Initial preconditioning per § 80.52(a)(1). Vehicles shall be refueled randomly with the fuels required in § 80.49 when testing to augment the complex emission model.

(c) Exhaust emissions tests, dynamometer procedure per 40 CFR 86.137-90 with:

(1) Exhaust Benzene and 1,3-Butadiene emissions measured per § 80.55; and

(2) Formaldehyde and Acetaldehyde emissions measured per § 80.56.

§ 80.52 Vehicle preconditioning.

(a) Initial vehicle preconditioning and preconditioning between tests with different fuels shall be performed in accordance with the "General vehicle handling requirements" per 40 CFR 86.132-96, up to and including the completion of the hot start exhaust test.

(b) The preconditioning procedure prescribed at 40 CFR 86.132-96 shall be observed for preconditioning vehicles between tests using the same fuel.

§§ 80.53-80.54 [Reserved]

§ 80.55 Measurement methods for benzene and 1,3-butadiene.

(a) Sampling for benzene and 1,3-butadiene must be accomplished by bag sampling as used for total hydrocarbons determination. This procedure is detailed in 40 CFR 86.109.

(b) Benzene and 1,3-butadiene must be analyzed by gas chromatography. Expected values for benzene and 1,3-butadiene in bag samples for the baseline fuel are 4.0 ppm and 0.30 ppm respectively. At least three standards ranging from at minimum 50% to 150% of these expected values must be used to calibrate the detector. An additional standard of at most 0.01 ppm must also