Support Document to the Proposed Regulations for Revisions to the Federal Test Procedure: Detailed Discussion and Analysis for the specific numerical standards. Due to the absence of relevant test data on which to base a decision, no supplemental test procedures or standards are proposed for diesel particulate.

Included in the composite calculation are a cold start bag (based on Bag 1 of the conventional FTP) and the three bags of the SFTP (called Bag 4, 5, and 6). The weighting factor for each of the four bags is adjusted as appropriate to reflect the proposed level of control for each type of driving in the SFTP. Because the exhaust constituents respond differently to the loads and speeds of the new SFTP cycles, the proposed levels of control and, thus, the weighting factors of the composite calculation differ somewhat for different pollutants. The proposed weighting factors are:

	Percentages	
	THC/NMHC	CO & NO_X
Bag 1 (cold start from FTP)	21	15
Bag 4 (866 cycle from SFTP)	24	37
Bag 5 (SC01 from SFTP)	27	20
Bag 6 (US06 from SFTP)	28	28

The Agency is proposing that changes in the achievable levels of control over the SFTP tests would track changes in the underlying FTP standards and, thus, adoption of the central proposal would have the effect of automatically reducing the composite standards in step with any mandatory future declines in the FTP standards.[8]

Flexibilities are proposed to allow manufacturers to reduce their testing burden, particularly during development testing. (See Support Document to the Proposed Regulations for Revisions to the Federal Test Procedure: Detailed Discussion and Analysis and Technical Reports for discussion.)[9]

Emissions Standards and Phase-in—The Agency is proposing to phase in the proposed requirements for aggressive driving and air conditioning control prior to implementing the intermediate soak requirements. It is proposed that the standards apply to 40 percent of each manufacturer's combined production of LDVs and LDTs for the 1998 model year, 80 percent in 1999, and 100 percent in 2000. Small volume manufacturers would not have to comply until the 2000 model year. All the proposed requirements would apply during this phase-in period, except that Bag 5 could be conducted with a 10-minute soak instead of the proposed 60-minute soak for control of intermediate soak emissions. The 60-minute soak would be required for all vehicles starting with model year 2001, including small volume manufacturers.

The Agency is continuing to analyze the impact of this phase-in schedule, particularly when considered in conjunction with other recently promulgated rules (such as revisions to the evaporative test procedures) as well as potential future programs (such as voluntary Federal low emission vehicle standards). Comments are specifically requested (1) on the impact of this phase-in schedule when considered with other programs and (2) providing suggestions for other schedules which will coordinate programs more effectively. The Agency will review this information in developing the final rule to determine if a more logical coordination schedule is possible while maximizing the cost/benefit effectiveness of this rule.

The proposal recognizes that adoption of emission standards more stringent than current Federal Tier 1 standards will likely result in emission control strategies that reduce catalyst light-off times.[10] This could have a significant impact on the costs and benefits of the intermediate soak requirement. As Tier 1 standards are the current legal requirement and the status of future standard changes is uncertain at this time, this proposal presumes Tier 1 applicability. The Agency invites comments and data addressing the cost/benefit implications of the proposed soak requirement under a Federal Tier 2 (or equivalent) program.

Each of the test cycles is run on a system providing accurate replication of real road load forces at the interface between drive tires and the dynamometer over the full speed range. In addition, the new US06 cycle requires significantly higher power absorption capacity, due to the higher power requirements of this aggressive driving cycle. While EPA intends to use a large-diameter single-roll dynamometer with electronic control of power absorption to meet these requirements for both the new SFTP and current FTP testing, any system would be allowed that yields equivalent or superior test results.

The improved road load simulation and the new criteria for allowable speed variation for FTP compliance determination are proposed to be implemented in the 1998 model year. Manufacturers could elect to use improved road load simulations prior to 1998, at their option.

The Agency is also proposing a minor procedural change that would remove the current 5500-pound test weight cap, to be implemented in the 1998 model year with the improved road load simulations.

B. Alternative Approaches

As indicated, EPA is considering a number of alternatives to critical elements of the central proposal. The following provides a summary of the most important of these alternatives. A full discussion of all the options and alternatives considered is found in the Support Document to the Proposed Regulations for Revisions to the Federal Test Procedure: Detailed Discussion and Analysis.

In determining compliance with the emission standards, EPA is considering two alternatives to the proposed FTP/SFTP composite and the related standards: (1) promulgating three separate sets of standards, one set each for aggressive driving, post-soak startup emissions, and A/C impacts; and (2) promulgating a single set of standards, based on a simple weighted average of separate standards for each control area. Both of these alternatives would use the same cycles and test procedures as the composite approach of the central proposal. However, instead of weighing them with Bag 1 of the FTP and using bag weights to help establish appropriate compliance procedures and standards, the alternative approaches would establish emission standards specifically for each new control area.

The Agency did not select either of these alternatives as the central proposal because of difficulties encountered in determining the appropriate amount of in-use compliance margin to allow when establishing emission standards. Also, the proposed concept of indexing the SFTP standards to any future changes in FTP standards probably would not work with either of the two alternatives. If data are submitted that could help establish appropriate in-use margins, EPA would reevaluate the most appropriate compliance structure and, if

[8] The issue of what standards would apply in the context of a voluntary Federal low emission vehicle program will be determined in a separate rulemaking (60 FR 4712, January 24, 1995).

[9] Both the Support Document to the Proposed Regulations for Revisions to the Federal Test Procedure: Detailed Discussion and Analysis and the Technical Reports are in the public docket for review.

[10] Time required for the catalyst to reach the temperature needed to sustain significant catalytic activity.