

above the standard may not exceed an upper limit specified in the ABT regulations. Once an engine family is certified to an FEL, that FEL becomes the enforceable emissions limit for all the engines in that family for purposes of compliance testing. Averaging is allowed only between engine families in the same averaging set, as defined in the regulations.

Banking means the retention of emission credits by the engine manufacturer for use in future model year averaging or trading. Trading means the exchange of emission credits between nonroad diesel engine manufacturers which can then be used for averaging purposes, banked for future use, or traded to another engine manufacturer.

The existing ABT program for nonroad diesel engines covers NMHC+NO_x emissions as well as PM emissions. With today's notice we are proposing to make the ABT program available for the proposed NO_x standards and proposed PM standards. (For engines less than 75 horsepower where we are proposing combined NMHC+NO_x standards, the ABT program would continue to be available for the proposed NMHC+NO_x standards as well as the proposed PM standards.) ABT would not be available for the proposed NMHC standards for engines above 75 horsepower or for the proposed CO standards for any engines.

As noted earlier, the existing ABT program for nonroad diesel engines includes FEL caps—limits on how high the emissions from credit-using engine families can be. No engine family may be certified above these FEL caps. These limits provide the manufacturers compliance flexibility while protecting against the introduction of unnecessarily high-emitting engines. When we propose new standards, we typically propose new FEL caps for the new standards. In the past, we have generally set the FEL caps at the emission levels allowed by the previous standard, unless there was some specific reason to do otherwise. We are proposing to do otherwise here because the proposed standard levels in today's notice are so much lower than the current standards levels, especially the Tier 4 standards for engines above 75 horsepower. The transfer to new technology is feasible and appropriate. Thus, to ensure that the ABT provisions are not used to continue producing old-technology high-emitting engines under the new program, the proposed FEL caps would not, in general, be set at the previous standards. An exception is for the proposed NMHC+NO_x standard for engines between 25 and 50 horsepower

effective in model year 2013, where we are proposing to use the previously applicable NMHC+NO_x standard for the FEL cap since the gap between the previous and proposed standards is approximately 40 percent (rather than 90 percent for engines above 75 horsepower).

For engines above 75 horsepower certified during the phase-in period, there would be two separate sets of engines with different FEL caps. For engines certified to the existing (Tier 3) NMHC+NO_x standards during the phase-in, the FEL cap would necessarily continue to be the existing FEL caps as adopted in the October 1998 rule. For engines certified to the proposed Tier 4 NO_x standard during the phase-in, the FEL cap would be 3.3 g/bhp-hr for engines between 75 and 100 horsepower, 2.8 g/bhp-hr for engines between 100 and 750 horsepower, and 4.6 g/bhp-hr for engines above 750 horsepower. These proposed NO_x FEL caps represent an estimate of the NO_x emission level that is expected under the combined NMHC+NO_x standards that apply with the existing previous tier standards. Beginning in model year 2014 when the proposed Tier 4 NO_x standard for engines above 75 horsepower take full effect, we are proposing a NO_x FEL cap of 0.60 g/bhp-hr for engines above 75 horsepower. (As described below, we are proposing to allow a small number of engines greater than 75 horsepower to have NO_x FELs above the 0.60 g/bhp-hr cap beginning in model year 2014.) Given the fact that the proposed Tier 4 NO_x standard is approximately a 90 percent reduction from the existing standards for engines above 75 horsepower, we do not believe the previous standard would be appropriate as the FEL cap for all engines once the Tier 4 standards are fully phased-in. We believe that the proposed NO_x FEL caps will ensure that manufacturers adopt NO_x aftertreatment technology across all of their engine designs (with the exception of a limited number) but will also allow for some meaningful use of averaging during the phase-in period. When compared to the proposed 0.30 g/bhp-hr NO_x standard, the proposed NO_x FEL cap of 0.60 g/bhp-hr (effective when the Tier 4 standards are fully phased-in) is consistent with FEL caps set in previous rulemakings.

For the transitional PM standards being proposed for engines between 25 and 75 horsepower effective in model year 2008 and for the Tier 4 PM standards for engines below 25 horsepower, we are proposing the previously applicable Tier 2 PM standards (which do vary within the 25

to 75 horsepower category) for the FEL caps since the gap between the previous and proposed standards is approximately 50 percent (rather than in excess of 90 percent for engines above 75 horsepower). For the proposed Tier 4 PM standard effective in model year 2013 for engines between 25 and 75 horsepower, we are proposing a PM FEL cap of 0.04 g/bhp-hr, and for the proposed Tier 4 PM standard effective in model years 2011 and 2012 for engines between 75 and 750 horsepower, we are proposing a PM FEL cap of 0.03 g/bhp-hr. (As described below, we are proposing to allow a small number of Tier 4 engines greater than 25 horsepower to have PM FELs above these caps.) Given the fact that the proposed Tier 4 PM standards for engines above 25 horsepower are less than 10 percent of the previous standards, we do not believe the previous standards would be appropriate as FEL caps once the Tier 4 standards take effect. We believe that the proposed PM FEL caps will ensure that manufacturers adopt PM aftertreatment technology across all of their engine designs (except for a limited number of engines), yet will still provide substantial flexibility in meeting the standards.

For the proposed Tier 4 PM standards for engines above 750 horsepower there is a phase-in period during model years 2011 through 2013. During the phase-in period, there would be two separate sets of engines with different FEL caps. For engines certified to the existing Tier 2 PM standard, the FEL cap would continue to be the existing PM FEL cap adopted in the October 1998 rule. For engines certified to the proposed Tier 4 PM standard during the phase-in, the FEL cap would be 0.15 g/bhp-hr (the PM standard for the previous tier). Beginning in model year 2014, when the proposed Tier 4 PM standard for engines above 750 horsepower takes full effect, consistent with the proposed caps for lower horsepower categories, we are proposing a PM FEL cap of 0.03 g/bhp-hr. (As described below, we are proposing to allow a small number of engines greater than 750 horsepower to have PM FELs above the 0.03 g/bhp-hr cap beginning in model year 2014.) We believe that the proposed PM FEL caps for engines above 750 horsepower will ensure that manufacturers adopt PM aftertreatment technology across all of their engine designs once the standard is fully phased-in (with the exception of a limited number) while allowing for some meaningful use of averaging during the phase-in period.

Table VII.A-1 contains the proposed FEL caps and the effective model year