

B. Introduction of 15 ppm Nonroad Diesel Sulfur Fuel in One Step

EPA carefully evaluated and is seeking comment on alternative regulatory approaches. Instead of the proposed two-step reduction in nonroad diesel sulfur, one alternative would require that the nonroad diesel sulfur level be reduced to 15ppm beginning June 1, 2008. This alternative would have the advantage of enabling use of high efficiency exhaust emission control technology for nonroad engines as early as the 2009 model year. It also would have several disadvantages which have

prompted us not to propose it. The disadvantages in comparison to the proposal include inadequate lead-time for engine and equipment manufacturers and refiners, leading to increased costs and potential market disruptions. In this section, we describe this alternative in greater detail and discuss potential engine and fuel impacts. We also present our estimated emission and benefit impacts. Two other one-step fuel options which are variations of the alternative discussed in this section, Options 1a and 1b in Table VI-1, are presented in Chapter 12 of the draft RIA for this proposal.

1. Description of the One-Step Alternative

While numerous engine standards and phase-in schedules are possible, we considered the standards shown in Tables VI-2 and VI-3 as being the most stringent one-step program that could be considered potentially feasible considering cost, lead-time, and other factors. These standards are similar to those in our proposed option, the primary difference being the generally earlier phase-in dates for the PM standards.

TABLE VI-2.—PM STANDARDS FOR 1-STEP FUEL SCENARIO
[g/bhp-hr]

Engine power	Model year					
	2009	2010	2011	2012	2013	2014
hp < 25	0.30	.....	.....	.....	.....	.....
25 ≤ hp < 50	10.22	.....	.....	.....	0.02	.....
50 ≤ hp < 75 .....	.....	.....	.....	.....	0.02	.....
75 ≤ hp < 175 .....	.....	.....	0.01	.....	.....	.....
.....	.....	^a 50%	^a 50%	^a 100%	.....	.....
175 ≤ hp < 750 .....	.....	0.01	.....	.....	.....	.....
.....	^a 50%	^a 50%	^a 100%	.....	.....	.....
hp ≥ 750 .....	.....	.....	.....	.....	0.01	.....
.....	.....	.....	^a 50%	^a 50%	^a 50%	^a 100%

Notes:

^a Percentages are the model year sales required to comply with the indicated standard.

TABLE VI-3.—NO_x AND NMHC STANDARDS FOR 1-STEP FUEL SCENARIO
[g/bhp-hr]

Engine power	Model year			
	2011	2012	2013	2014
25 ≤ hp < 75 .....	.....	.....	^a 3.5	.....
75 ≤ hp < 175	0.30 NO _x 0.14 NMHC			
.....	.....	^b 50%	^b 50%	^b 100%
175 ≤ hp < 750	0.30 NO _x 0.14 NMHC			
.....	^b 50%	^b 50%	^b 50%	^b 100%
hp ≥ 750	0.30 NO _x 0.14 NMHC			
.....	^b 50%	^b 50%	^b 50%	^b 100%

Notes:

^a A 3.5 NMHC + NO_x standard would apply to the 25–50 hp engines. Engines greater than 50hp are already subject to this standard in 2008 under the existing Tier 3 program.

^b Percentages are the model year sales required to comply with the indicated standards.

2. Engine Emission Impacts

The main advantage associated with this one-step approach is pulling ahead the long-term PM engine standards. By making 15 ppm sulfur fuel widely available by late 2008, we could accelerate the long-term PM engine

standards, leading to the introduction of precious metal catalyzed PM traps as early as 2009, two years earlier than possible under the two-step sulfur reduction approach. Some stakeholders have expressed the concern that a two-step approach leads to later than desired introduction of high-efficiency exhaust

emissions controls on nonroad diesels because this cannot happen until the 15 ppm fuel standard goes into effect. As shown in Table VI-1, there would be additional public health benefits associated with this one-step approach. However, in comparison to the proposal, the additional benefits are