

and 11 would use benzene saturation. The analysis projects that 43 refineries would reduce their benzene levels to the proposed benzene standard or lower, while 49 refineries would reduce their benzene levels but still would need to purchase credits to comply with the average benzene standard. Including the refineries with benzene levels currently below 0.62, we project that there would be a total of 62 refineries producing gasoline with benzene levels at 0.62 or lower. The model assumes that those with benzene levels lower than 0.62

volume percent would generate credits for sale to other refineries. Finally, the model projects that there would be 6 refineries that would take no benzene reduction action and comply with the proposed program solely through the use of benzene credits.

The refinery model estimates that the proposed benzene standard would cost 0.13 cents per gallon, averaged over the entire U.S. gasoline pool. (When averaged only over those refineries which are assumed to take steps to reduce their benzene levels, the average

cost would be 0.19 cents per gallon.) This per-gallon cost would result from an industry-wide investment in capital equipment of \$500 million to reduce gasoline benzene levels. This would amount to an average of \$5 million in capital investment in each refinery that adds such equipment.<sup>284</sup>

We also estimated annual aggregate costs associated with the proposed new fuel standard. As shown in Table IX.A-1, these costs are projected to begin at \$186 million in 2011 and increase over time as fuel demand increases.

TABLE IX.A-1.—ANNUAL AGGREGATE FUEL COSTS

2011	2013	2015	2017	2019	2020
\$185,533,000	\$191,873,000	\$198,283,000	\$204,212,000	\$209,875,000	\$212,606,000

Several observations can be made from these results from our nationwide analysis. First, significantly reducing gasoline benzene levels to low levels, coupled with the flexibility of an ABT program, will incur fairly modest costs. This is primarily because we expect that refiners would optimize their benzene control strategies, resulting in large benzene reductions at a low overall program cost. With high benzene prices relative to those of gasoline projected to continue (even if they drop from the recent very high levels), extraction would be a very low cost technology—the primary reason why the cost of the overall program is very low. Also, precursor rerouting, either with or without isomerization in an existing unit, is a low-cost technology requiring little or no capital to realize. The model concludes that even the higher-cost benzene saturation technology would be fairly cost-effective overall because larger refineries that install this

technology would take advantage of their economies of scale.

b. Regional Distribution of Costs

The benzene reductions estimated by the cost model and associated costs vary significantly by region. Table IX.A-2 summarizes the initial benzene levels and the projected benzene levels after refiners take anticipated steps to reduce the benzene in their gasoline and the estimated per-gallon costs for complying with the proposed benzene standard.

Table IX.A-2 shows that under the proposed program the largest benzene reductions occur in the areas with the highest benzene levels. This is expected as many of these refineries are not doing anything to reduce their gasoline benzene levels today and simple, low-cost technologies can be employed to realize large reductions in their benzene levels. In PADDs 1 and 3, which have significant benzene control today to meet the RFG requirements, a more modest benzene reduction would occur.

Many of the refineries producing fuel for sale in PADDs 1 and 3 cannot reduce their benzene levels further because they are already extracting all the benzene that they can. Extraction is the technology most used in PADDs 1 and 3, resulting in a much lower average cost for reducing benzene in these regions.

For comparison, we also modeled a program where the 0.62 vol% average standard was supplemented by a maximum average benzene cap standard, as described in section VII above. We did not propose such a maximum average standard because the main effect would simply be to shift emission reductions from one region of the country to another with no change in overall emission reductions. Table IX.A-2 shows that a maximum average standard would increase costs slightly nationwide, but that PADD 2 benzene levels, already above the standard, would rise while other areas improved.

TABLE IX.A-2.—CURRENT AND PROJECTED BENZENE LEVELS AND COSTS BY PADD

[\$2002, 7% ROI before taxes]

	PADD					U.S.
	1	2	3	4	5 (w/o CA)	
Current Benzene Level (vol%)	0.66	1.32	0.86	1.54	1.87	0.97
Projected Benzene Level (vol%)	0.51	0.73	0.55	0.95	1.04	0.62
Cost (c/gal)	0.05	0.25	0.05	0.40	0.72	0.125
Projected Benzene Level (vol%) (With 1.3 vol% Max-Avg Std)	0.50	0.75	0.56	0.90	0.88	0.62
Cost (c/gal)	0.06	0.22	0.03	0.43	1.18	0.130

c. Cost Effects of Different Standards

We also estimated the benzene reduction costs for other benzene

reduction levels, as summarized in Table IX.A-3. The cost model estimates that a 0.52 volume percent benzene

<sup>284</sup> The modeling does not separate out capital costs for the recovery of lost octane and supplying

additional hydrogen, but rather includes these in

the operating cost estimates. Therefore, actual capital costs maybe somewhat greater.

standard with an ABT program <sup>285</sup> is the maximum benzene reduction possible when each refinery employs the maximum appropriate reformate benzene control (that is, benzene extraction whenever possible, and benzene saturation otherwise).

TABLE IX.A-3.—COSTS OF VARIOUS POTENTIAL BENZENE CONTROL STANDARDS  
[2002, 7% ROI before taxes]

Average standard (vol%)	Cost (cents/gallon)
0.62 (Proposed Standard) ....	0.13
0.65 .....	0.09
0.60 .....	0.15
0.52 .....	0.36

The results in Table IX.A-3 indicate that the cost for reducing benzene levels is not very sensitive to the benzene standard in the range from 0.60 to 0.65 volume percent benzene. This is because we project that standards in this range would not require many of the smaller or otherwise higher-cost refineries to employ benzene saturation, which is the highest cost technology. Also, in this range of potential standards, the ABT program would allow the refining industry to optimize the benzene control technologies they apply. The need for all refineries to use either benzene saturation or benzene extraction to comply with a 0.52 vol% standard explains the much higher cost for a program with a standard that range.

We also examined the effect of the ABT program on cost. Without ABT, we assume that the standard would be met by all refineries. To achieve a national average level of 0.62 vol% benzene without an ABT program would require an absolute standard of 0.73 vol%. We estimate that such a program would result in a nationwide average cost of 0.25 cents per gallon, about double the cost of the program with ABT.

d. Effect on Cost Estimates of Higher Benzene Prices

As described above, we also performed a sensitivity analysis to estimate the costs of the proposed program if the recent very high prices for chemical grade benzene continue

<sup>285</sup> The cost model projects that this standard would require an ABT program because many of the refineries modeled would not be able to achieve this standard. These refineries would have to rely on the purchase of credits from other refineries which are already below this benzene level, or other refineries which could install benzene control technology to get their benzene levels below this standard. This scenario assumes a fully utilized credit program.

into the future. We estimate that at an average benzene price of \$38 dollars above that for gasoline, the program would cost 0.08 cents per gallon less on average nationwide.

3. Economic Impacts of MSAT Control Through Gasoline Sulfur and RVP Control and a Total Toxics Standard

As discussed above in section VII, we have considered two approaches to fuel-related MSAT control that would involve increasing the stringency of two existing emission control programs, the gasoline sulfur program and the gasoline volatility program. We estimated the cost of programs that would further reduce the sulfur content and Reid vapor pressure (RVP) of gasoline. For these costs estimates, the LP refinery model was used to estimate the costs for the year 2010, including the fuel economy impacts. We summarize these costs here and provide detailed analyses in Chapter 9 of the RIA.

For sulfur control, we estimated the costs of reducing U.S. gasoline sulfur levels down to 10 ppm from the 30 ppm sulfur level required for Tier 2 sulfur control. The costs are based on revamping current hydrotreaters installed to meet the 30 ppm sulfur standard. We estimate that reducing gasoline sulfur down to 10 ppm would cost 0.51 cents per gallon, taking into account the fuel economy effects. The analysis also estimates that U.S. refineries would invest \$1.3 billion in new capital to achieve this sulfur reduction.

We also estimated costs for lowering summertime gasoline RVP down to a maximum of 7.8 or 7.0 RVP from the current average for non-RVP controlled gasoline of 9.0 RVP. The estimated volume of gasoline required to meet an additional low RVP requirement was assumed to be equivalent to half of the volume of the reformulated gasoline sold within the PADD, applied to the conventional gasoline sold within the PADD. This simple means of estimating the volume of gasoline affected by future additional RVP control programs was used because the analysis of possible new low RVP programs established for complying with the 8 hour ozone National Ambient Air Quality Standards (NAAQS) was not completed when the cost analysis was initiated. The per-gallon cost is not expected to vary much by the size of the program. The cost analysis estimates that reducing RVP down to 7.8 RVP would cost 0.23 cents per gallon. The analysis also estimates that U.S. refineries would invest \$121 million in new capital to achieve this level of RVP control. The cost analysis estimates that reducing RVP down to 7.0 RVP would

cost 0.40 cents per gallon. Meeting a 7.0 RVP standard is projected to cause U.S. refiners to invest \$184 million in new capital to achieve this level of RVP control.

We have also evaluated the costs of programs that would control total air toxics. These programs, the analyses of which are also found in Chapter 9 of the RIA, would all be more costly than the proposed program.

B. What Are the Vehicle Cost Impacts?

In assessing the economic impact of setting cold temperature emission standards, we have made a best estimate of the necessary vehicle modifications and their associated costs. In making our estimates we have relied on our own technology assessment, which includes information supplied by individual manufacturers and our own in-house testing. Estimated costs typically include variable costs (for hardware and assembly time) and fixed costs (for research and development, retooling, and certification). All costs are presented in 2003 dollars. Full details of our cost analysis can be found in Chapter 8 of the draft RIA.

As described in section VI, we are not expecting hardware changes to Tier 2 vehicles in response to new cold temperature standards. Tier 2 vehicles are already being equipped with very sophisticated emissions control systems. We expect manufacturers to use these systems to minimize emissions at cold temperatures. We were able to demonstrate significant emissions reductions from a Tier 2 vehicle through recalibration alone. In addition, a standard based on averaging allows some vehicles to be above the numeric standard as long as those excess emissions are offset by vehicles below the standard. Averaging would help manufacturers in cases where they are not able to achieve the numeric standard for a particular vehicle group, thus helping manufacturers avoid costly hardware changes. The phase-in of standards and emissions credits provisions also help manufacturers avoid situations where expensive vehicle modifications would be needed to meet a new cold temperature NMHC standard. Therefore, we are not projecting hardware costs or additional assembly costs associated with meeting new cold temperature NMHC emissions standards.

Manufacturers would incur research and development (R&D) costs associated with a new cold temperature standard, and some likely would need to upgrade testing facilities to handle an increased number of cold tests during vehicle development. We have estimated the

fixed costs associated with R&D and test facilities. We project that manufacturers would recover R&D costs over a five-year period and their facilities costs over a ten-year period. Long-term impacts on engine costs are expected to decrease as manufacturers fully amortize their fixed costs. Because manufacturers recoup fixed costs over a large volume of vehicles, average per vehicle costs due to the new cold temperature NMHC standards are expected to be low. We project that the average incremental costs associated

with the new cold temperature standards would be less than \$1 per vehicle.

We are not anticipating additional costs for the proposed new evaporative emissions standard. As discussed in section VI, we expect that manufacturers will continue to produce 50-state evaporative systems that meet LEV II standards. Therefore, harmonizing with California's LEV-II evaporative emission standards would streamline certification and be an "anti-backsliding" measure. It also would

codify the approach manufacturers have already indicated they are taking for 50-state evaporative systems.

We also estimated annual aggregate costs associated with the new cold temperature emissions standards. These costs are projected to increase with the phase-in of standards and peak in 2014 at about \$13.4 million per year, then decrease as the fixed costs are fully amortized. The projected aggregate costs are summarized below, with annual estimates provided in Chapter 8 of the RIA.

TABLE IX.B-1.—ANNUAL AGGREGATE COSTS

2010	2012	2014	2016	2018	2020
\$11,119,000 .....	\$12,535,000	\$13,406,000	\$12,207,000	\$10,682,000	\$0

C. What Are the Gas Can Cost Impacts?

For gas cans, we have made a best estimate of the necessary technologies and their associated costs. Estimated costs include variable costs (for hardware and assembly time) and fixed costs (for research and development, retooling, and certification). The analysis also considers fuels savings associated with low emissions gas cans. Cost estimates based on the projected technologies represent an expected change in the cost of gas cans as they begin to comply with new emission standards. All costs are presented in 2003 dollars. Full details of our cost analysis, including fuel savings, can be found in Chapter 10 of the Draft RIA.

Table IX.C-1 summarizes the projected near-term and long-term per unit average costs to meet the new emission standards. Long-term impacts on gas cans are expected to decrease as

manufacturers fully amortize their fixed costs. We project that manufacturers will generally recover their fixed costs over a five-year period, so these costs disappear from the analysis after the fifth year of production. These estimates are based on the manufacturing cost rather than predicted price increases.<sup>286</sup> The table also shows our projections of average fuel savings over the life of the gas can. Fuel savings can be estimated based on the VOC emissions reductions due to gas can controls.

TABLE IX.C-1.—ESTIMATED AVERAGE GAS CAN COSTS AND LIFETIME FUEL SAVINGS

	Cost
Near-Term Costs .....	\$2.69
Long-Term Costs .....	1.52
Fuel Savings (NPV) .....	4.24

With current and projected estimates of gas can sales, we translate these costs into projected direct costs to the nation for the new emission standards in any year. A summary of the annual aggregate costs to manufacturers is presented in Table IX.C-2. The annual cost savings due to fuel savings start slowly, then increase as greater numbers of compliant gas cans enter the market. Table IX.C-2 also presents a summary of the estimated annual fuel savings. Aggregate costs are projected to peak in 2013 at about \$51 million and then drop to about \$29 million once fixed costs are recovered. The change in numbers beyond 2015 occurs due to projected growth in gas can sales and population.

TABLE IX.C-2.—TOTAL ANNUALIZED COSTS AND FUEL SAVINGS

	2009	2013	2015	2020
Costs .....	\$49,112,000	\$51,228,000	\$28,772,000	\$31,767,000
Fuel Saving .....	14,381,000	76,037,000	92,686,000	98,861,000

D. Cost Per Ton of Emissions Reduced

We have calculated the cost per ton of HC, benzene, total MSATs, and PM emissions reductions associated with the proposed fuel, vehicle, and gas can programs using the costs described above and the emissions reductions described in section V. More detail on the costs, emissions reductions, and cost

per ton estimates can be found in the draft RIA. We have calculated the costs per ton using the net present value of the annualized costs of the program, including gas can fuel savings, from 2009 through 2030 and the net present value of the annual emission reductions through 2030. We have also calculated the cost per ton of emissions reduced in

the year 2030 using the annual costs and emissions reductions in that year alone. This number represents the long-term cost per ton of emissions reduced. For fuels, the cost per ton estimates include costs and emission reductions that will occur from all motor vehicles and nonroad engines fueled with gasoline.<sup>287</sup>

<sup>286</sup> These cost numbers may not necessarily reflect actual price increases as manufacturer production costs, perceived product enhancements, and other market impacts will affect actual prices to consumers.

<sup>287</sup> The proposed standards do not apply to nonroad engines, since section 202 (1) authorizes controls only for "motor vehicles," which does not include nonroad vehicles. CAA section 216 (2). However, we are reducing benzene in all gasoline,

including that used in nonroad equipment. Therefore, we are including both the costs and the benzene emissions reductions associated with the fuel used in nonroad equipment.

For vehicles and gas cans, we are proposing to establish NMHC and HC standards, respectively, which would also reduce benzene and other VOC-based toxics. For vehicles, we are also expecting direct PM reductions due to the proposed NMHC standard.<sup>288</sup> Section V provides an overview of how we are estimating benzene and PM reductions resulting from the NMHC standards for vehicles and benzene reductions resulting from the HC standard for gas cans. We have not attempted to apportion costs across these various pollutants for purposes of the cost per ton calculations since there is no distinction in the technologies, or

associated costs, used to control the pollutants. Instead, we have calculated costs per ton by assigning all costs to each individual pollutant. If we apportioned costs among the pollutants, the costs per ton presented here would be proportionally lowered depending on what portion of costs were assigned to the various pollutants.

The results for HC for vehicles and gas cans are provided in Table IX.D-1 using both a three percent and a seven percent social discount rate. Again, this analysis assumes that all costs are assigned to HC control. The discounted cost per ton of HC reduced for the proposal as a whole would be \$0

because the fuel savings from gas cans offsets the costs of gas can and vehicle controls. The table presents these as \$0 per ton, rather than calculating a negative value that has no clear meaning. For vehicles in 2030, the cost per ton is \$0 because by 2030 all fixed costs have been recovered and there are no variable costs estimated for the proposed vehicle program.<sup>289</sup>

The cost per ton estimates for each individual program are presented separately in the tables below, and are part of the justification for each of the programs. For informational purposes, we also present the cost per ton for the three programs combined.

TABLE IX.D-1.—HC AGGREGATE COST PER TON AND LONG-TERM ANNUAL COST PER TON  
[\$2003]

	Discounted lifetime cost per ton at 3%	Discounted lifetime cost per ton at 7%	Long-term cost per ton in 2030
Vehicles .....	\$14	\$18	\$0
Gas Cans (without fuel savings) .....	230	250	180
Gas Cans (with fuel savings) .....	0	0	0
Combined (with fuel savings) .....	0	0	0

The cost per ton of benzene reductions for fuels, vehicles, and gas

cans are shown in Table IX.D-2 using the same methodology as noted above

for HC. The results are calculated by assigning all costs to benzene control.

TABLE IX.D-2.—BENZENE AGGREGATE COST PER TON AND LONG-TERM ANNUAL COST PER TON  
[\$2003]

	Discounted lifetime cost per ton at 3%	Discounted lifetime cost per ton at 7%	Long-term cost per ton in 2030
Fuels .....	\$10,900	11,100	11,400
Vehicles .....	260	340	0
Gas Cans (without fuels savings) .....	27,800	30,900	21,600
Gas Cans (with fuel savings) .....	0	0	0
Combined (with fuel savings) .....	3,400	3,600	2,400

The cost per ton of overall MSAT reductions for fuels, vehicles, and gas cans are shown in Table IX.D-3 using

the same methodology as noted above for HC and benzene. The results are

calculated by assigning all costs to MSAT control.

TABLE IX.D-3.—MSAT AGGREGATE COST PER TON AND LONG-TERM ANNUAL COST PER TON  
[\$2003]

	Discounted lifetime cost per ton at 3%	Discounted lifetime cost per ton at 7%	Long-term cost per ton in 2030
Fuels .....	\$10,900	\$11,100	\$11,400
Vehicles .....	40	53	0
Gas Cans (without fuel savings) .....	1,800	2,000	1,400
Gas Cans (with fuel savings) .....	0	0	0
Combined (with fuel savings) .....	710	780	450

<sup>288</sup> Again, although gasoline PM is not a mobile source air toxic, the rule will result in emission reductions of gasoline PM which reductions are accounted for in our analysis.

<sup>289</sup> We note that in determining whether the proposed vehicle controls represent the greatest emissions reductions achievable considering costs, we have considered the proposed cold-start standards separately from any other proposed control program. Similarly, in considering whether

the proposed controls for gas cans represent the best available control considering economic feasibility, we considered the proposed gas can standards separately from any other proposed control program.

We have also calculated a cost per ton for direct PM reductions for vehicles. Again, this analysis assigns all related costs to direct PM reductions.

TABLE IX.D-4.—DIRECT PM AGGREGATE COST PER TON AND LONG-TERM ANNUAL COST PER TON (\$2003)

	Discounted lifetime cost per ton at 3%	Discounted lifetime cost per ton at 7%	Long-term cost per ton in 2030
Vehicles .....	\$620	\$820	\$0

E. Benefits

This section presents our analysis of the health and environmental benefits that can be expected to occur as a result of the proposed standards throughout the period from initial implementation through 2030. In terms of emission benefits, we expect to see significant reductions in mobile source air toxics (MSATs) from the proposed vehicle, fuel and gas can standards, reductions in VOCs (an ozone precursor) from the proposed cold temperature vehicle and gas can standards, and reductions in direct PM<sub>2.5</sub> from the proposed cold temperature vehicle standards. When translating emission benefits to health effects and monetized values, however, we only quantify the PM-related benefits associated with the proposed cold temperature vehicle standards.

The reductions in PM from the proposed cold temperature vehicle standards would result in significant reductions in premature deaths and other serious human health effects, as well as other important public health and welfare effects. We estimate that in 2030, the benefits we are able to monetize are expected to be approximately \$6.5 billion using a 3 percent discount rate and \$5.9 billion using a 7 percent discount rate. Total social costs of the entire proposal for the same year (2030) are \$205 million. Details on the costs of each of the proposed controls are in section IX.F. These estimates, and all monetized benefits presented in this section, are in year 2003 dollars.

We demonstrate that the proposed standards would reduce cancer and noncancer risk from reduced exposure to MSATs (as described in Section IV of this preamble). However, we do not translate this risk reduction into benefits. We also do not quantify the benefits related to ambient reductions in ozone due to the VOC emission reductions expected to occur as a result of the proposed standards. The following section describes in more

detail why these benefits are not quantified.

1. Unquantified Health and Environmental Benefits

This benefit analysis estimates improvements in health and human welfare that can be expected as a result of the proposed standards, and monetizes those benefits. The benefits would come from reductions in emissions of air toxics (including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, and other air toxic pollutants discussed in Section III), ambient ozone (as a result of VOC controls), and direct PM<sub>2.5</sub> emissions.

While there will be benefits associated with air toxic pollutant reductions, notably with regard to reductions in exposure and risk (see Section IV, above), we do not attempt to monetize those benefits. This is primarily because available tools and methods to assess air toxics risk from mobile sources at the national scale are not adequate for extrapolation to incidence estimations or benefits assessment. The best suite of tools and methods currently available for assessment at the national scale are those used in the National Scale Air Toxics Assessment (NATA; these tools are discussed in Section IV.A). The EPA Science Advisory Board specifically commented in their review of the 1996 National Air Toxics Assessment (NATA) that these tools were not yet ready for use in a national-scale benefits analysis, because they did not consider the full distribution of exposure and risk, or address sub-chronic health effects.<sup>290</sup> While EPA has since improved the tools, there remain critical limitations for estimating incidence and assessing benefits of reducing mobile source air toxics. We continue to work to address these limitations, and we are exploring the feasibility of a quantitative benefits assessment for air toxics as part of a case study being done for benzene as part of

the ongoing update to the Section 812 retrospective and prospective studies.<sup>291</sup>

We also do not estimate the monetized benefits of VOC controls in this benefits analysis. Though VOCs would be demonstrably reduced as a result of the cold temperature vehicle standards, we assume that these emissions would not have a measurable impact on ozone formation since the standards seek to reduce VOC emissions at cold ambient temperatures and ozone formation is primarily a warm ambient temperature issue. The gas can controls would likely result in ozone benefits, though we do not attempt to monetize those benefits. This is primarily due to the magnitude of, and uncertainty associated with, the estimated changes in ambient ozone associated with the proposed standards. In Section IV.C., we discuss that the ozone modeling conducted for the proposed gas can standards results in a net reduction in the population weighted ozone design value metric measured within the modeled domain (37 Eastern states and the District of Columbia). The net improvement is very small, however, and would likely lead to negligible monetized benefits. Instead, we acknowledge that this analysis may underestimate the benefits associated with reductions in ozone precursor emissions achieved by the various proposed standards. We discuss these benefits qualitatively within the Regulatory Impact Analysis.

Table IX.E-1 lists each of the MSAT and ozone health and welfare effects that remain unquantified because of current limitations in the methods or available data. This table also includes the PM-related health and welfare effects that also remain unquantified due to current method and data limitations. Chapter 12 of the Regulatory Impact Analysis for the proposed standards provides a qualitative description of the health and welfare effects not quantified in this analysis.

<sup>290</sup> Science Advisory Board. 2001. NATA—Evaluating the National-Scale Air Toxics

Assessment for 1996—an SAB Advisory. <http://www.epa.gov/ttn/atw/sab/sabrev.html>.

<sup>291</sup> The analytic blueprint for the Section 812 benzene case study can be found at <http://www.epa.gov/air/sect812/appendixi51203.pdf>.

TABLE IX.E-1.—UNQUANTIFIED AND NON-MONETIZED EFFECTS

Pollutant/effects	Effects not included in primary estimates—changes in:
Ozone Health <sup>a</sup> .....	Premature mortality: short term exposures <sup>b</sup> . Hospital admissions: respiratory. Emergency room visits for asthma. Minor restricted-activity days. School loss days. Asthma attacks. Cardiovascular emergency room visits. Acute respiratory symptoms. Chronic respiratory damage. Premature aging of the lungs. Non-asthma respiratory emergency room visits. Exposure to UVb (+/-) <sup>e</sup> .
Ozone Welfare .....	Decreased outdoor worker productivity. Agricultural yields for —commercial forests. —some fruits and vegetables. —non-commercial crops. Damage to urban ornamental plants. Impacts on recreational demand from damaged forest aesthetics. Ecosystem functions. Exposure to UVb (+/-) <sup>e</sup> .
PM Health <sup>c</sup> .....	Premature mortality—short term exposures <sup>d</sup> . Low birth weight. Pulmonary function. Chronic respiratory diseases other than chronic bronchitis. Non-asthma respiratory emergency room visits. Exposure to UVb (+/-) <sup>e</sup> .
PM Welfare .....	Visibility in many Class I areas. Residential and recreational visibility in non-Class I areas. Soiling and materials damage. Damage to ecosystem functions. Exposure to UVb (+/-) <sup>e</sup> .
MSAT Health .....	Cancer (benzene, 1,3-butadiene, formaldehyde, acetaldehyde, naphthalene). Anemia (benzene). Disruption of production of blood components (benzene). Reduction in the number of blood platelets (benzene). Excessive bone marrow formation (benzene). Depression of lymphocyte counts (benzene). Reproductive and developmental effects (1,3-butadiene). Irritation of eyes and mucus membranes (formaldehyde). Respiratory irritation (formaldehyde). Asthma attacks in asthmatics (formaldehyde). Asthma-like symptoms in non-asthmatics (formaldehyde). Irritation of the eyes, skin, and respiratory tract (acetaldehyde). Upper respiratory tract irritation and congestion (acrolein).
MSAT Welfare .....	Direct toxic effects to animals. Bioaccumulation in the food chain. Damage to ecosystem function. Odor.

<sup>a</sup> In addition to primary economic endpoints, there are a number of biological responses that have been associated with ozone health effects including increased airway responsiveness to stimuli, inflammation in the lung, acute inflammation and respiratory cell damage, and increased susceptibility to respiratory infection.

<sup>b</sup> EPA sponsored a series of meta-analyses of the ozone mortality epidemiology literature, published in the July 2005 volume of the journal Epidemiology, which found that short-term exposures to ozone may have a significant effect on daily mortality rates, independent of exposure to PM. EPA is currently considering how to include an estimate of ozone mortality in its primary benefits analyses.

<sup>c</sup> In addition to primary economic endpoints, there are a number of biological responses that have been associated with PM health effects including morphological changes and altered host defense mechanisms. The public health impact of these biological responses may be partly represented by our quantified endpoints.

<sup>d</sup> While some of the effects of short term exposures are likely to be captured in the estimates, there may be premature mortality due to short term exposure to PM not captured in the cohort study upon which the primary analysis is based.

<sup>e</sup> May result in benefits or disbenefits.

2. Quantified Human Health and Environmental Effects of the Proposed Cold Temperature Vehicle Standard

In this section we discuss the PM<sub>2.5</sub> benefits of the proposed cold temperature vehicle standard. To estimate PM<sub>2.5</sub> benefits, we rely on a benefits transfer technique. The benefits

transfer approach uses as its foundation the relationship between emission reductions and ambient PM<sub>2.5</sub> concentrations modeled across the contiguous 48 states (and DC) for the Clean Air Nonroad Diesel (CAND)

proposal.<sup>292</sup> For a given future year, we first calculate the ratio between CAND direct PM<sub>2.5</sub> emission reductions and direct PM<sub>2.5</sub> emission reductions associated with the proposed cold temperature vehicle control standard

<sup>292</sup> See 68 FR 28327, May 23, 2003.

(proposed emission reductions/CAND emission reductions). We multiply this ratio by the percent that direct PM<sub>2.5</sub> contributes towards population-weighted reductions in total PM<sub>2.5</sub> due to the CAND standards. This calculation results in a “benefits apportionment factor” for the relationship between direct PM emissions and primary PM<sub>2.5</sub>, which is then applied to the BenMAP-based incidence and monetized benefits from the CAND proposal. In this way, we apportion the results of the proposed CAND analysis to its underlying direct PM emission reductions and scale the

apportioned benefits to reflect differences in emission reductions between the modeled CAND control option and the proposed standards.<sup>293</sup> This benefits transfer method is consistent with the approach used in other recent mobile and stationary source rules.<sup>294</sup>

Table IX.E-2 presents the primary estimates of reduced incidence of PM-related health effects for the years 2020 and 2030 for the proposed cold temperature vehicle control strategies.<sup>295</sup> In 2030, we estimate that PM-related annual benefits would result

in approximately 910 fewer premature fatalities, 590 fewer cases of chronic bronchitis, 1,600 fewer non-fatal heart attacks, and 940 fewer hospitalizations (for respiratory and cardiovascular disease combined). In addition, we estimate that the emission controls would reduce days of restricted activity due to respiratory illness by about 620,000 days and reduce work-loss days by about 110,000 days. We also estimate substantial health improvements for children from reduced upper and lower respiratory illness, acute bronchitis, and asthma attacks.

TABLE IX.E-2.—ESTIMATED ANNUAL REDUCTIONS IN INCIDENCE OF HEALTH EFFECTS RELATED TO THE PROPOSED COLD TEMPERATURE VEHICLE STANDARD <sup>a</sup>

Health effect	2020 Annual incidence reduction	2030 Annual incidence reduction
PM-Related Endpoints:		
Premature Mortality <sup>b</sup>		
Adult, age 30+ and Infant, age <1 year .....	480	910
Chronic bronchitis (adult, age 26 and over) .....	330	590
Non-fatal myocardial infarction (adult, age 18 and over) .....	820	1,600
Hospital admissions—respiratory (all ages) <sup>c</sup> .....	260	540
Hospital admissions—cardiovascular (adults, age >18) <sup>d</sup> .....	220	400
Emergency room visits for asthma (age 18 years and younger) .....	360	630
Acute bronchitis, (children, age 8–12) .....	790	1,400
Lower respiratory symptoms (children, age 7–14) .....	9,400	17,000
Upper respiratory symptoms (asthmatic children, age 9–18) .....	7,100	13,000
Asthma exacerbation (asthmatic children, age 6–18) .....	12,000	21,000
Work Loss Days .....	63,000	110,000
Minor restricted activity days (adults age 18–65) .....	370,000	620,000

<sup>a</sup> Incidence is rounded to two significant digits. Estimates represent benefits from the proposed rule nationwide, excluding Alaska and Hawaii.

<sup>b</sup> PM-related adult mortality based upon studies by Pope, et al 2002.<sup>296</sup> PM-related infant mortality based upon studies by Woodruff, Grillo, and Schoendorf, 1997.<sup>297</sup>

<sup>c</sup> Respiratory hospital admissions for PM include admissions for chronic obstructive pulmonary disease (COPD), pneumonia and asthma.

<sup>d</sup> Cardiovascular hospital admissions for PM include total cardiovascular and subcategories for ischemic heart disease, dysrhythmias, and heart failure.

PM also has numerous documented effects on environmental quality that affect human welfare. These welfare effects include direct damages to property, either through impacts on material structures or by soiling of surfaces, and indirect economic damages through the loss in value of recreational visibility or the existence value of important resources. Additional information about these welfare effects can be found in Chapter 12 of the Regulatory Impact Analysis prepared for this proposal.

3. Monetized Benefits

Table IX.E-3 presents the estimated monetary value of reductions in the incidence of those health effects we are able to monetize for the proposed cold temperature vehicle standard. Total annual PM-related health benefits are estimated to be approximately \$6.5 or \$5.9 billion in 2030 (3 percent and 7 percent discount rate, respectively). These estimates account for growth in real gross domestic product (GDP) per capita between the present and 2030.

Table IX.E-3 indicates with a “B” those additional health and

environmental benefits of the rule that we are unable to quantify or monetize. These effects are additive to the estimate of total benefits, and are related to the following sources:

- There are many human health and welfare effects associated with PM, ozone, and toxic air pollutant reductions that remain unquantified because of current limitations in the methods or available data. A listing of the benefit categories that could not be quantified or monetized in our benefit estimates are provided in Table IX.E-1.

<sup>293</sup> Note that while the proposed regulations also control VOCs, which contribute to PM formation, the benefits transfer scaling approach only scales benefits based on NO<sub>x</sub>, SO<sub>2</sub>, and direct PM emission reductions. PM benefits will likely be underestimated as a result, though we are unable to estimate the magnitude of the underestimation.

<sup>294</sup> See: Clean Air Nonroad Diesel final rule (69 FR 38958, June 29, 2004); Nonroad Large Spark-Ignition Engines and Recreational Engines standards (67 FR 68241, November 8, 2002); Final Industrial Boilers and Process Heaters NESHAP (69

FR 55217, September 13, 2004); Final Reciprocating Internal Combustion Engines NESHAP (69 FR 33473, June 15, 2004); Final Clean Air Visibility Rule (EPA-452/R-05-004, June 15, 2005); Ozone Implementation Rule (documentation forthcoming).

<sup>295</sup> The “primary estimate” refers to the estimate of benefits that reflects the suite of endpoints and assumptions that EPA believes yields the expected value of air quality improvements related to the proposed standards. The impact that alternative endpoints and assumptions have on the benefit estimates are explored in appendixes to the RIA.

<sup>296</sup> Pope, C.A., III, R.T. Burnett, M.J. Thun, E.E. Calle, D. Krewski, K. Ito, and G.D. Thurston. 2002. “Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution.” *Journal of American Medical Association* 287:1132–1141.

<sup>297</sup> Woodruff, T.J., J. Grillo, and K.C. Schoendorf. 1997. “The Relationship Between Selected Causes of Postneonatal Infant Mortality and Particulate Infant Mortality and Particulate Air Pollution in the United States.” *Environmental Health Perspectives* 105(6):608–612.

- The PM benefits scaled transfer approach, derived from the Clean Air Nonroad Diesel rule, does not account for VOCs as precursors to ambient PM<sub>2.5</sub> formation. To the extent that VOC emission reductions associated with the

proposed regulations contribute to reductions in ambient PM<sub>2.5</sub>, this analysis does not capture the related health and environmental benefits of those changes.

- The PM air quality model only captures the benefits of air quality improvements in the 48 states and DC; PM benefits for Alaska and Hawaii are not reflected in the estimate of benefits.

TABLE IX.E-3.—ESTIMATED ANNUAL MONETARY VALUE OF REDUCTIONS IN INCIDENCE OF HEALTH AND WELFARE EFFECTS RELATED TO THE PROPOSED COLD TEMPERATURE VEHICLE STANDARD

[Millions of 2003\$]<sup>a,b</sup>

Health effect	Pollutant	2020 Estimated value of reductions	2030 Estimated value of reductions
PM-Related Premature mortality <sup>c, d</sup> :			
Adult, 30+ years and Infant, <1 year.			
3 percent discount rate .....	PM <sub>2.5</sub> .....	\$3,100	\$6,000
7 percent discount rate .....	.....	2,800	5,400
Chronic bronchitis (adults, 26 and over) .....	PM <sub>2.5</sub> .....	150	270
Non-fatal acute myocardial infarctions:			
3 percent discount rate .....	.....	80	150
7 percent discount rate .....	PM <sub>2.5</sub> .....	77	150
Hospital admissions for respiratory causes .....	PM <sub>2.5</sub> .....	4.8	10
Hospital admissions for cardiovascular causes .....	PM <sub>2.5</sub> .....	5.1	9.4
Emergency room visits for asthma .....	PM <sub>2.5</sub> .....	0.12	0.21
Acute bronchitis (children, age 8–12) .....	PM <sub>2.5</sub> .....	0.32	0.58
Lower respiratory symptoms (children, age 7–14) .....	PM <sub>2.5</sub> .....	0.17	0.30
Upper respiratory symptoms (asthma, age 9–11) .....	PM <sub>2.5</sub> .....	0.20	0.37
Asthma exacerbations .....	PM <sub>2.5</sub> .....	0.57	1.0
Work loss days .....	PM <sub>2.5</sub> .....	9.2	14
Minor restricted activity days (MRADs) .....	PM <sub>2.5</sub> .....	21	36
Monetized Total <sup>e</sup> :			
Base estimate.			
3 percent discount rate .....	PM <sub>2.5</sub> .....	3,400+ B	6,500+ B
7 percent discount rate .....	.....	3,100+ B	5,900+ B

<sup>a</sup> Dollars are rounded to two significant digits. The PM estimates represent benefits from the proposed rule across the contiguous United States.

<sup>b</sup> Monetary benefits adjusted to account for growth in real GDP per capita between 1990 and the analysis year (2020 or 2030).

<sup>c</sup> Valuation of premature mortality based on long-term PM exposure assumes discounting over the SAB recommended 20 year segmented lag structure described in the Regulatory Impact Analysis for the Final Clean Air Interstate Rule (March 2005). Results show 3 percent and 7 percent discount rates consistent with EPA and OMB guidelines for preparing economic analyses (US EPA, 2000 and OMB, 2003).<sup>298</sup>

<sup>d</sup> Adult mortality based upon studies by Pope et al. 2002. Infant mortality based upon studies by Woodruff, Grillo, and Schoendorf, 1997.

<sup>e</sup> B represents the monetary value of health and welfare benefits not monetized. A detailed listing is provided in Table IX.E-1.

4. What Are the Significant Limitations of the Benefit Analysis?

Perhaps the most significant limitation of this analysis is our inability to quantify a number of potentially significant benefit categories associated with improvements in air quality that would result from the proposed standards. Most notably, we are unable to estimate the benefits from reduced air toxics exposures because the available tools and methods to assess mobile source air toxics risk at the national scale are not adequate for extrapolation to incidence estimations or benefits assessment. We also do not quantify ozone benefits due to the magnitude of, and uncertainty

associated with, the modeled changes in ambient ozone associated with the proposed gas can standards, despite net benefits, when population weighted, in the ozone design value metric observed across the modeled domain (see Section IV.C).

More generally, every benefit-cost analysis examining the potential effects of a change in environmental protection requirements is limited to some extent by data gaps, limitations in model capabilities (such as geographic coverage), and uncertainties in the underlying scientific and economic studies used to configure the benefit and cost models. Deficiencies in the scientific literature often result in the inability to estimate quantitative changes in health and environmental effects, such as potential increases in premature mortality associated with increased exposure to carbon monoxide. Deficiencies in the economics literature often result in the inability to assign

economic values even to those health and environmental outcomes which can be quantified. These general uncertainties in the underlying scientific and economics literature, which can cause the valuations to be higher or lower, are discussed in detail in the RIA and its supporting references. Key uncertainties that have a bearing on the results of the benefit-cost analysis of the proposed standards include the following:

- The exclusion of potentially significant and unquantified benefit categories (such as health, odor, and ecological benefits of reduction in air toxics, ozone, and PM);
- Errors in measurement and projection for variables such as population growth;
- Uncertainties in the estimation of future year emissions inventories and air quality;
- Uncertainties associated with the scaling of the PM results of the modeled

<sup>298</sup> U.S. Environmental Protection Agency, 2000. Guidelines for Preparing Economic Analyses. [www.yosemite1.epa.gov/ee/epa/eed/hsf/pages/Guideline.html](http://www.yosemite1.epa.gov/ee/epa/eed/hsf/pages/Guideline.html).

Office of Management and Budget, The Executive Office of the President, 2003. Circular A-4. <http://www.whitehouse.gov/omb/circulars>.



benefits analysis to the proposed standards, especially regarding the assumption of similarity in geographic distribution between emissions and human populations and years of analysis;

- Uncertainty in the estimated relationships of health and welfare effects to changes in pollutant concentrations including the shape of the C-R function, the size of the effect estimates, and the relative toxicity of the many components of the PM mixture;
- Uncertainties in exposure estimation; and
- Uncertainties associated with the effect of potential future actions to limit emissions.

Despite these uncertainties, we believe this benefit-cost analysis provides a conservative estimate of the expected economic benefits of the proposed standards for cold temperature vehicle control in future years because of the exclusion of potentially significant benefit categories. Acknowledging benefits omissions and uncertainties, we present a best estimate of the total benefits based on our interpretation of the best available scientific literature and methods supported by EPA's technical peer review panel, the Science Advisory Board's Health Effects Subcommittee (SAB-HES). EPA has also worked to address many of the comments made by the National Academy of Sciences (NAS) in a September 26, 2002 report on its review of the Agency's methodology for analyzing the health benefits of measures taken to reduce air pollution. EPA addressed many of these comments in the analysis of the final CAIR rule.<sup>299</sup> The analysis of the proposed rule incorporates this most recent work.

There is one category where new studies suggest the possibility of significant additional economic benefits. Over the past several years, EPA's SAB has expressed the view that there were not sufficient data to show a separate ozone mortality effect, in essence saying that any ozone benefits are captured in the PM-related mortality benefit estimates. However, in their most recent advice, the SAB recommended that EPA reconsider the evidence on ozone-related mortality based on the publication of several recent analyses that found statistically significant associations between ozone and mortality. Based on these studies and the recommendations from the SAB, EPA sponsored three independent

meta-analyses of the ozone-mortality epidemiology literature to inform a determination on including this important health endpoint. The studies were peer-reviewed and printed in the journal *Epidemiology* in July 2005.<sup>300 301 302</sup>

EPA is reviewing the body of literature available on the association of ozone exposure and premature mortality. EPA's second external review draft of the Criteria Document for ozone has concluded that there is strong evidence that exposure to ozone has been associated with premature mortality.<sup>303</sup> We are exploring ways of appropriately characterizing the premature mortality benefits of reducing ozone and included an estimate in recent analyses of the Clear Skies legislation.<sup>304</sup> We plan to include a quantification of ozone mortality benefits in future air pollution rulemakings.

In contrast to the additional benefits of the proposed standards discussed above, it is also possible that this rule will result in disbenefits in some areas of the United States. The effects of ozone and PM on radiative transfer in the atmosphere can lead to effects of uncertain magnitude and direction on the penetration of ultraviolet light and climate. Ground level ozone makes up a small percentage of total atmospheric ozone (including the stratospheric layer) that attenuates penetration of ultraviolet-b (UVb) radiation to the ground. EPA's past evaluation of the information indicates that potential disbenefits would be small, variable, and with too many uncertainties to attempt quantification of relatively small changes in average ozone levels over the course of a year.<sup>305</sup> EPA's most recent provisional assessment of the currently available information

indicates that potential but unquantifiable benefits may also arise from ozone-related attenuation of UVb radiation.<sup>306</sup> EPA believes that we are unable to quantify any net climate-related disbenefit or benefit associated with the combined ozone and PM reductions in this rule.

#### 5. How Do the Benefits Compare to the Costs of the Proposed Standards?

This proposed rule provides three separate provisions that reduce air toxics emissions from mobile sources: cold temperature vehicle controls, an emissions control program for gas cans, and a control program limiting benzene in gasoline. A full appreciation of the overall economic consequences of these provisions requires consideration of the benefits and costs expected to result from each standard, not just those that could be expressed here in dollar terms. As noted above, due to limitations in data availability and analytical methods, our benefits analysis only monetizes the PM<sub>2.5</sub>-related benefits from direct PM emission reductions associated with the cold temperature standards. There are a number of health and environmental effects associated with the proposed standards that we were unable to quantify or monetize (see Table IX.E-1).

Table IX.E-4 contains the estimates of monetized benefits of the proposed cold temperature vehicle standards and estimated social welfare costs for each of the proposed control programs.<sup>307</sup> The annual social welfare costs of all provisions of this proposed rule are described more fully in Section IX.F. It should be noted that the estimated social welfare costs for the vehicle program contained in this table are for 2019. The 2019 vehicle program costs are included for comparison purposes only and are therefore not included in the total 2020 social costs. There are no compliance costs associated with the vehicle program after 2019; as explained elsewhere in this preamble, the vehicle compliance costs are primarily R&D and facilities costs that are expected to be recovered by manufacturers over the first ten years of the program.

The results in Table IX.E-4 suggest that the 2020 monetized benefits of the cold temperature vehicle standards are greater than the expected social welfare costs of that program in 2019. Specifically, the annual benefits of the

<sup>300</sup> Levy, J.I., Chemerynski, S.M., Sarnat, J.A. 2005. Ozone Exposure and Mortality: An Empirical Bayes Meta-Regression Analysis. *Epidemiology*. 16:458-468.

<sup>301</sup> Bell, M.L., Dominici, F., Samet, J.M. 2005. A Meta-Analysis of Time-Series Studies of Ozone and Mortality with Comparison to the National Morbidity, Mortality, and Air Pollution Study. *Epidemiology*. 16:436-445.

<sup>302</sup> Ito, K., DeLeon, S.F., Lippmann, M. 2005. Associations Between Ozone and Daily Mortality: Analysis and Meta-Analysis. *Epidemiology*. 16:446-457.

<sup>303</sup> EPA, 2005. Air Quality Criteria for Ozone and Related Photochemical Oxidants (Second External Review Draft). August. <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=137307>

<sup>304</sup> For technical details about Clear Skies multi-pollutant analysis, see [http://www.epa.gov/airmarkets/mp/bmresults/health\\_benefits\\_method.pdf](http://www.epa.gov/airmarkets/mp/bmresults/health_benefits_method.pdf)

<sup>305</sup> EPA, 2005. Air Quality Criteria for Ozone and Related Photochemical Oxidants (First External Review Draft). January. <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=114523>

<sup>299</sup> See Chapter 4 of the Final Clean Air Interstate Rule RIA ([www.epa.gov/cair](http://www.epa.gov/cair)) for a discussion of EPA's ongoing efforts to address the NAS recommendations in its regulatory analyses.

<sup>306</sup> EPA, 2005. Air Quality Criteria for Ozone and Related Photochemical Oxidants (Second External Review Draft). August. <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=137307>

<sup>307</sup> Social costs represent the welfare costs of the rule to society. These social costs do not consider transfer payments (such as taxes) that are simply redistributions of wealth.

program would be approximately \$3,400 + B million or \$3,100 + B million annually in 2020 (using a 3 percent and 7 percent discount rate in the benefits analysis, respectively), compared to estimated social welfare costs of approximately \$11 million in the last year of the program (2019). These benefits are expected to increase to

\$6,500 + B million or \$5,900 + B million annually in 2030 (using a 3 percent and 7 percent discount rate in the benefits analysis, respectively), even as the social welfare costs of that program fall to zero. Table IX.E-4 also presents the costs of the other proposed rule provisions: an emissions control program for gas cans and a control

program limiting benzene in gasoline. Though we are unable to present the benefits associated with these two programs, we note for informational purposes that the benefits associated with the proposed cold temperature vehicle standards alone exceed the costs of all three proposed rule provisions combined.

TABLE IX.E-4.—SUMMARY OF ANNUAL BENEFITS OF THE PROPOSED COLD TEMPERATURE VEHICLE STANDARDS AND COSTS OF ALL PROVISIONS OF THE PROPOSED STANDARDS<sup>a</sup>

[Millions of 2003 dollars]

Description	2020	2030
Estimated Social Welfare Costs <sup>b</sup> :		
Proposed Cold Temperature Vehicle Standards .....	\$11 <sup>c</sup> .....	\$0
Proposed Gasoline Container Standards .....	32 .....	39
Proposed Fuel Standards <sup>d</sup> .....	210 .....	250
Total .....	240 .....	290
Fuel Savings .....	- 73 .....	- 82
Total Social Welfare Costs .....	170 .....	205
Total PM <sub>2.5</sub> -Related Health Benefits of the Proposed Cold Temperature Vehicle Standards <sup>e</sup> :		
3 percent discount rate .....	3,400 + B <sup>f</sup> ...	6,500 + B <sup>f</sup>
7 percent discount rate .....	3,100 + B <sup>f</sup> ...	5,900 + B <sup>f</sup>

<sup>a</sup>All estimates are rounded to two significant digits and represent annualized benefits and costs anticipated for the years 2020 and 2030, except where noted. Totals may not sum due to rounding.

<sup>b</sup>Note that costs are the annual total costs of reducing all pollutants associated with each provision of the proposed MSAT control package. Also note that while the cost analysis only utilizes a 7 percent discount rate to calculate annual costs, the benefits analysis uses both a 3 percent and 7 percent discount rate to calculate annual benefits. Benefits reflect only direct PM reductions associated with the cold temperature vehicle standards.

<sup>c</sup>These costs are for 2019; the vehicle program compliance costs terminate after 2019 and are included for illustrative purposes. They are not included in the total social welfare cost sum for 2020.

<sup>d</sup>Our modeling for the total costs of the proposed gasoline benzene program included California gasoline, since it was completed before we decided to propose that California gasoline not be covered by the program. California refineries comprise approximately 1 percent of these 2projected costs. For the final rule, we expect to exclude California refineries from the analysis.

<sup>e</sup>Valuation of premature mortality based on long-term PM exposure assumes discounting over the SAB recommended 20 year segmented lag structure described in the Regulatory Impact Analysis for the Final Clean Air Interstate Rule (March 2005). Annual benefits analysis results reflect the use of a 3 percent and 7 percent discount rate in the valuation of premature mortality and nonfatal myocardial infarctions, consistent with EPA and OMB guidelines for preparing economic analyses (US EPA, 2000 and OMB, 2003).<sup>308</sup>

<sup>f</sup>Not all possible benefits or disbenefits are quantified and monetized in this analysis. B is the sum of all unquantified benefits and disbenefits. Potential benefit categories that have not been quantified and monetized are listed in Table IX.E-1.

F. Economic Impact Analysis

We prepared a draft Economic Impact Analysis (EIA) to estimate the economic impacts of the proposed emission control program on the gas can, gasoline fuel, and light-duty vehicle markets. In this section we briefly describe the Economic Impact Model (EIM) we developed to estimate both the market-level changes in price and outputs for affected markets and the social costs of the program and their distribution across affected economic sectors. We also present the results of our analysis.

We estimate the net social costs of the proposed program to be about \$171.5 million in 2020. This estimate reflects the estimated costs associated with the

gasoline, gas can, and vehicle controls and the expected fuel savings from better evaporative controls on gas cans. The results of the economic impact modeling performed for the gasoline fuel and gas can control programs suggest that the social costs of those two programs are expected to be about \$244.3 million in 2020 with consumers of these products expected to bear about 60 percent of these costs. We estimate fuel savings of about \$72.8 million in 2020 that will accrue to consumers. There are no social costs associated with the vehicle program in 2020. These estimates, and all costs presented in this section, are in year 2003 dollars.

With regard to market level impacts in 2020, the maximum price increase for gasoline fuel is expected to be about 0.1 percent (0.2 cents per gallon) for PADD 5. The price of gas cans is expected to increase by about 1.8 percent (\$0.20 per can) in areas that already have gas can requirements and about 32.5 percent (\$1.52 per can) in areas that do not.

Detailed descriptions of the EIM, the model inputs, modeling results, and several sensitivity analyses can be found in Chapter 13 of the Regulatory Impact Analysis prepared for this proposal.

1. What Is an Economic Impact Analysis?

An Economic Impact Analysis (EIA) is prepared to inform decision makers about the potential economic consequences of a regulatory action. The analysis consists of estimating the social costs of a regulatory program and the distribution of these costs across stakeholders. These estimated social costs can then be compared with estimated social benefits (as presented in Section IX.E). As defined in EPA's Guidelines for Preparing Economic Analyses, social costs are the value of the goods and services lost by society resulting from (a) the use of resources to comply with and implement a regulation and (b) reductions in

<sup>308</sup> U.S. Environmental Protection Agency, 2000. Guidelines for Preparing Economic Analyses. [www.yosemite1.epa.gov/ee/epa/eed/hsf/pages/Guideline.html](http://www.yosemite1.epa.gov/ee/epa/eed/hsf/pages/Guideline.html).

Office of Management and Budget, The Executive Office of the President, 2003. Circular A-4. <http://www.whitehouse.gov/omb/circulars>.

output.<sup>309</sup> In this analysis, social costs are explored in two steps. In the market analysis, we estimate how prices and quantities of goods affected by the proposed emission control program can be expected to change once the program goes into effect. In the economic welfare analysis, we look at the total social costs associated with the program and their distribution across stakeholders.

## 2. What Is the Economic Impact Model?

The Economic Impact Model (EIM) is a behavioral model developed for this proposal to estimate price and quantity changes and total social costs associated with the emission controls under consideration. The EIM simulates how producers and consumers of affected products can be expected to respond to an increase in production costs as a result of the proposed emission control program. In this EIM, compliance costs are directly borne by producers of affected goods. Depending on the producers' and consumers' sensitivity to price changes, producers may be able to pass some or all of these compliance costs on to the consumers of these goods in the form of higher prices. Consumers adjust their consumption of affected goods in response to these price changes. This information is passed back to the producers in the form of purchasing decisions. The EIM takes these behavioral responses into account to estimate new market equilibrium quantities and prices for all modeled sectors and the resulting distribution of social costs across these stakeholders (producers and consumers).

## 3. What Economic Sectors Are Included in This Economic Impact Analysis?

There are three economic sectors affected by the control programs described in this proposal: gas cans, gasoline fuel, and light-duty vehicles. In this Economic Impact Analysis we model only the impacts on the gas can and gasoline fuel markets. We did not model the impacts on the light-duty vehicle market. This is because the compliance costs for the proposed vehicle program are expected to be very small, less than \$1 per vehicle and, even if passed on entirely, are unlikely to affect producer or consumer behavior. Therefore, we do not expect these proposed controls to affect the quantity of vehicles produced or their prices. At the same time, however, the light-duty vehicle compliance costs are a cost to society and should be included in the

<sup>309</sup> EPA Guidelines for Preparing Economic Analyses, EPA 240-R-00-003, September 2000, p 113. A copy of this document can be found at <http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/Guidelines.html#download>

economic welfare analysis. We do this by adding the vehicle program engineering compliance cost estimates to the estimated social costs of the gasoline and gas can programs.

With regard to the gasoline fuel and gas can markets, we consider only the impacts on residential users of these products. This means that we focus the analysis on the use of these products for personal transportation (gasoline fuel) or residential lawns and garden care or recreational uses (gas cans) and do not consider how the costs of complying with the proposed programs may affect the production of goods and services that use gasoline fuel or gas cans as production inputs. We believe this approach is reasonable because the commercial share of the end-user markets for both gasoline fuel and gas cans is relatively small.<sup>310 311</sup> In addition, for most commercial users the share of the cost of these products to total production costs is also small (e.g., the cost of a gas can is only a very small part of the total production costs for an agricultural or construction firm). Therefore, a price increase of the magnitude anticipated for this control program is not expected to have a noticeable impact on prices or quantities of goods produced using these inputs (e.g., agricultural product or buildings).

With regard to the gasoline fuel analysis, it should be noted that this Economic Impact Analysis does not include California fuels in the market analysis. California fuels are only included, as a separate line item, in the economic welfare analysis. California currently has state-level controls that address air toxics from gasoline. Any actions that refiners may take to comply with the federal program are expected to be small and not affect market prices or quantities in that state. However, because the estimated fuel program

<sup>310</sup> The U.S. Department of Energy estimates that about 92 percent of gasoline used in the United States for transportation is used in light-duty vehicles. About 6 percent is used for commercial or industrial transportation, and the remaining 2 percent is used in recreational marine vessels. See U.S. Department of Energy, Energy Information Administration, 2004. "Annual Energy Outlook 2004 with projections to 2025." Last updated June 2, 2004. Table A-2 and Supplemental Table 34. [http://www.eia.doe.gov/oiaf/aeoref\\_tab.html](http://www.eia.doe.gov/oiaf/aeoref_tab.html).

<sup>311</sup> A recent study by CARB (1999) found that 94 percent of portable fuel containers in California were used by residential households California Environmental Protection Agency, Air Resources Board (CARB) 1999. See "Hearing Notice and Staff Report, Initial Statement of Reasons for Proposed Rule Making Public Hearing to Consider the Adoption of Portable Fuel Container Spillage Control Regulation." Sacramento, CA: California Environmental Protection Agency, Air Resources Board (CARB). A copy of this document is available at <http://www.arb.ca.gov/regact/spillcon/isor.pdf>

compliance costs include a small compliance cost for California, and this cost would be a cost to society, it is necessary to include those costs in the total economic welfare costs of the proposal. This is done by including the estimated engineering compliance costs as a separate line item. Also, consistent with the cost analysis, the economic impact analysis does not distinguish between reformulated and conventional gasoline fuels.

The EIM models the economic impacts on two gas can markets (states that currently have requirements for gas cans and those that do not), and four gasoline fuel markets (PADDs 1+3, PADD 2, PADD 4, PADD 5). The markets included in this EIA are described in more detail in Chapter 13 of the RIA for this proposal.

In the EIM, the gasoline fuel and gas can markets are not linked (there is no feedback mechanism between the gas can and gasoline fuel model segments). This is because these two sectors represent different aspects of fuel consumption (fuel storage and fuel production) and production and consumption of one product is not affected by the other. In other words, an increase in the price of gas cans is not expected to have an impact on the production and supply of gasoline, and vice versa. Production and consumption of each of these products are the result of other factors that have little cross-over impacts (the need for fuel storage; the need for personal transportation).

## 4. What Are the Key Features of the Economic Impact Model?

A detailed description of the features of the EIM and the data used in the analysis is provided in Chapter 13 of the RIA prepared for this rule. The model methodology is firmly rooted in applied microeconomic theory and was developed following the methodology set out in the OAQPS's Economic Analysis Resource Document.<sup>312</sup>

The EIM is a computer model comprised of a series of spreadsheet modules that simulate the supply and demand characteristics of the markets under consideration. The initial market equilibrium conditions are shocked by applying the compliance costs for the control program to the supply side of the markets (this is done by shifting the relevant supply curves by the amount of the compliance costs). The model equations can be analytically solved for

<sup>312</sup> U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Innovative Strategies and Economics Group, OAQPS Economic Analysis Resource Document, April 1999. A copy of this document can be found at <http://www.epa.gov/ttn/ecas/econdata/Rmanual2/>

equilibrium prices and quantities for the markets with the regulatory program and these new prices and quantities are used to estimate the social costs of the model and how those costs are shared among affected markets.

The EIM is a partial equilibrium, intermediate-run model that assumes perfect competition in the relevant markets. As explained in EPA's Guidelines for Preparing Economic Analyses, "partial equilibrium" means that the model considers markets in isolation and that conditions in other markets are assumed either to be unaffected by a policy or unimportant for social cost estimation.<sup>313</sup> The use of the intermediate run means that some factors of production are fixed and some are variable. In very short analyses, all factors of production would be assumed to be fixed, leaving the producers with no means to respond to the increased production costs associated with the regulation (e.g., they cannot adjust labor or capital inputs). Under this time horizon, the costs of the regulation fall entirely on the producer. In the long run, all factors of production are variable and producers can adjust production in response to cost changes imposed by the regulation (e.g., using a different labor/capital mix). In the intermediate run there is some resource immobility which may cause producers to suffer producer surplus losses, but they can also pass some of the compliance costs to consumers.

The perfect competition assumption is widely accepted economic practice for this type of analysis, and only in rare cases are other approaches used.<sup>314</sup> It should be noted that the perfect competition assumption is not primarily about the number of firms in a market. It is about how the market operates: the nature of the competition among firms. Indicators that allow us to assume perfect competition include absence of barriers to entry, absence of strategic behavior among firms in the market, and product differentiation.

With regard to the gasoline fuel market, the Federal Trade Commission (FTC) has developed an approach to ensure competitiveness in gasoline fuel markets. It reviews oil company mergers and frequently requires divestiture of refineries, terminals, and gas stations to maintain a minimum level of competition. This is discussed in more

detail in the industry profile prepared for this proposal.<sup>315</sup>

With regard to the gas can market, the small number of firms in the market is offset by several features of this market. Because gas cans are compact and lightweight, they are easy to transport far from their place of manufacture. This means that production is not limited to local producers. Although they vary by size and material, consumers are likely to view all gas cans as good substitutes for one another. Because the products are similar enough to be considered homogeneous (e.g., perfectly substitutable), consumers can shift their purchases from one manufacturer to another. There are only minimal technical barriers to entry that would prevent new firms from freely entering the market, since manufacturing is based on well-known plastic processing methods. In addition, there is significant excess capacity, enabling competitors to respond quickly to changes in price. Excess production capacity in the general container manufacturing market also means that manufacturers could potentially switch their product lines to compete in this segment of the market, often without a significant investment. In addition, there is no evidence of high levels of strategic behavior in the price and quantity decisions of the firms. Finally, it should be noted that contestable market theory asserts that oligopolies and even monopolies will behave very much like firms in a competitive market if manufacturers have extra production capacity and this capacity could allow them to enter the market costlessly (i.e., there are no sunk costs associated with this kind of market entry or exit).<sup>316</sup> As a result of these conditions, producers and consumers in the gas can market take the market price as given when making their production and consumption choices. For all these reasons, the market can be modeled as a competitive market even though the number of producers is small.

##### 5. What Are the Key Model Inputs?

Key model inputs for the EIM are the behavioral parameters, compliance costs

estimates, and market equilibrium quantities and prices.

The EIM is a behavioral model. The estimated social costs of this emission control program are a function of the ways in which producers and consumers of the gas cans and gasoline fuel affected by the standards change their behavior in response to the costs incurred in complying with the standards. These behavioral responses are incorporated in the EIM through the price elasticity of supply and demand (reflected in the slope of the supply and demand curves), which measure the price sensitivity of consumers and producers. The price elasticities used in this analysis are described in Chapter 13 of the RIA. The gasoline elasticities were obtained from the literature and are  $-0.2$  for demand and  $0.2$  for supply. This means that both the quantity supplied and demanded are expected to be fairly insensitive to price changes and that increases in prices are not expected to cause sales to fall or production to increase by very much. Because we were unable to find published supply and demand elasticities for the gas can market, we estimated these parameters using the procedures described in Chapter 13 of the RIA. This approach yielded a demand elasticity of  $-0.01$  and a supply elasticity of  $1.5$ . The estimated demand elasticity is nearly perfectly inelastic (equal to zero), which means that changes in price are expected to have very little effect on the quantity of gas cans demanded. However, supply is fairly elastic, meaning producers are expected to respond to a change in price. Therefore, consumers are expected to bear more of the burden of gas can regulatory control costs than producers.

Initial market equilibrium conditions are simulated using the same current year sales quantities and growth rates used in the engineering cost analysis. The initial equilibrium prices for gas can and gasoline fuel were obtained from industry sources and published government data. The initial equilibrium market conditions are shocked by applying the engineering compliance cost estimates described in earlier in this section. Although both the gas can and gasoline fuel markets are competitive markets, the model is shocked by applying the sum of variable and fixed costs. Two sets of compliance costs are used in the gas can market analysis, reflecting states with existing controls and states without existing controls. The compliance costs used to shock the gasoline fuel market are based on an average total cost (variable + fixed) analysis. An explanation for this

<sup>313</sup> EPA Guidelines for Preparing Economic Analyses, EPA 240-R-00-003, September 2000, p. 125-6.

<sup>314</sup> See, for example, EPA Guidelines for Preparing Economic Analyses, EPA 240-R-00-003, September 2000, p. 126.

<sup>315</sup> Section 3 Industry Organization, "Characterizing Gasoline Markets: a Profile," Final Report, prepared for EPA by RTI, August 2005.

<sup>316</sup> A monopoly or firms in oligopoly may not behave as neoclassical economic theories of the firm predict because they may be concerned about new entrants to the market. If super-normal profits are earned, potential competitors may enter the market. To respond to this threat, existing firm(s) in the market will keep prices and output at a level where only normal profits are made, setting price and output levels at or close to the competitive price and output. See Chapter 13 of the RIA for more information, Section 13.2.3.

approach can be found in Section 13.2.4.1 of the RIA prepared for this proposal. These gasoline fuel compliance costs differ across PADDs but are the same across years. Because California already has existing gasoline fuel controls, fuel volumes for that state are not included in the market analysis. However, because it may be necessary for refiners to adjust their production to comply with the new federal standards, California fuel controls are included in the economic welfare analysis.

Additional costs that need to be considered in the EIM are the savings associated with the gas can controls and the costs of the light-duty vehicle controls. The proposed gas can controls are expected to reduce evaporative emissions from fuel storage, leading to fuel savings for users of these containers. These fuel savings are not included in the market analysis for this economic impact analysis because these savings are not expected to affect consumer decisions with respect to the purchase of new containers. Fuel savings are included in the social cost analysis, however, because they are a savings that accrues to society. The estimated fuel savings are added to the estimated social costs as a separate line item. As noted above, the economic impacts of the light-duty vehicle controls are not modeled in the EIM. Instead, the estimated engineering compliance costs are used as a proxy, and are also added into the estimated social costs as a separate line item.

The EIM relies on the estimated compliance costs for the gas can and gasoline fuel programs described elsewhere in this preamble. Thus, the EIM reflects cost savings associated with ABT or other flexibility programs to the extent they are included in the estimated compliance costs.

6. What Are the Results of the Economic Impact Modeling?

Using the model and data described above, we estimated the economic impacts of the proposed emission control program. The results of our analysis are summarized in this section. Detailed results for all years are included in the appendices to Chapter 13 of the RIA. Also included as an appendix to that chapter are sensitivity analyses for several key inputs.

Market Impact Analysis. Market impacts are the estimated changes in the quantity of affected goods produced and their prices. As explained above, we estimated market impacts for only gasoline fuel and gas cans, and California fuel is not included in the market analysis for PADD 5. The estimated market impacts are presented in Table IX.F-1. In this table the market results for gasoline are presented for only 2015 because the compliance costs for the gasoline fuel program are constant for all years and therefore the results of the market analysis are the same for all years.<sup>317</sup> The market results for gas cans are presented for 2009 and 2015, reflecting the changes in

estimated compliance costs due to amortization of fixed costs over the first five years of the program. After 2013 the compliance costs remain constant for all future years.<sup>318</sup>

With regard to the gasoline fuel program, the market impacts are expected to be small, on average. The price of gasoline fuel is expected to increase by about 0.15 percent or less, depending on PADD. The expected reduction in quantity of fuel produced is expected to be less than 0.03 percent. The market impacts for the gas can program are expected to be more significant. In 2009, the first year of the gas can program, the model predicts a price increase of about 7 percent for gas cans in states that are currently have regulations for gas cans and about 57 percent for those that do not. Even with these larger price increases, however, the quantity produced is not expected to decrease by very much, less than 0.6 percent. These percent price increases and quantity decreases much smaller after the first five years. In 2015, the estimated gas can price increase is expected to be less than 2 percent for states that currently regulate gas cans and about 32.5 percent for states without such regulations. The quantity produced is expected to decrease by less than 0.4 percent. These changes are expected to remain constant for future years, even though the absolute quantities produced are expected to increase somewhat.

TABLE IX.F-1.—SUMMARY OF MARKET IMPACTS

Market	Engineering cost per unit	Change in price		Change in quantity	
		Absolute	Percent	Absolute	Percent
<b>2009</b>					
Gasoline Fuel: PADD 1 & 3. PADD 2 ..... PADD 4. PADD 5 (w/out CA).		N/A (gasoline fuel control program begins in 2011)			
		\$/can		Thousand Cans	
Gas Cans: States with existing programs ..... States without existing programs .....	\$0.77 ..... \$2.70 .....	\$0.76 ..... \$2.68 .....	6.9% ..... 57.4% .....	-6.8 ..... -88.5 .....	-0.07% ..... -0.57% .....
<b>2015</b>					
		¢/gallon		Million Gallons	
Gasoline Fuel: PADD 1 & 3 ..... PADD 2 .....	0.049¢ ..... 0.202¢ .....	0.03¢ ..... 0.11¢ .....	0.02% ..... 0.07% .....	-3.1 ..... -6.9 .....	-0.004% ..... -0.015% .....

<sup>317</sup> The number of gallons of gasoline fuel produced is expected to decrease in future years, but the percent decrease is expected to remain the

same; this is due to the growth in fuel consumption generally.

<sup>318</sup> The number of gas cans produced is expected to decrease in future years, but the percent decrease is expected to remain the same; this is due to the growth in gas can production generally.

TABLE IX.F-1.—SUMMARY OF MARKET IMPACTS—Continued

Market	Engineering cost per unit	Change in price		Change in quantity	
		Absolute	Percent	Absolute	Percent
PADD 4 .....	0.358¢ .....	0.19¢ .....	0.12% .....	-1.4 .....	-0.025%
PADD 5 (w/out CA) .....	0.391¢ .....	0.21¢ .....	0.13% .....	-2.5 .....	-0.026%
		\$/can		Thousand Cans	
Gas Cans:					
States with existing programs .....	\$0.21 .....	\$0.20 .....	1.9% .....	-2.1 .....	-0.02%
States without existing programs .....	\$1.53 .....	\$1.52 .....	32.5% .....	-56.4 .....	-0.32%

Economic Welfare Analysis. In the economic welfare analysis we look at the costs to society of the proposed program in terms of losses to consumer and producer surplus. These surplus losses are combined with the estimated vehicle compliance costs, fuel savings, and government revenue losses to estimate the net economic welfare impacts of the proposed program. Estimated annual net social costs for selected years are presented in Table IX-F-2. Initially, the estimated social costs of the program are relatively small and are attributable to the gas can program, which begins in 2009, and the vehicle program, which begins in 2010. For 2009 and 2010 the estimated social costs are less than \$40 million. In 2011 the estimated social costs increase to \$215 million, reflecting the beginning of the gasoline fuel program. In subsequent years, estimated social costs increase due to growth. However, they decrease in 2014, to \$169 million, when the gas can fixed costs are fully recovered and in 2020, to \$171.5 million, when the vehicle program compliance costs are terminated.

TABLE IX.F-2.—NET SOCIAL COSTS ESTIMATES FOR THE PROPOSED PROGRAM  
[2009 to 2035—2003\$, \$million]

Year	Total social costs (includes fuel savings)
2009 .....	\$38.4
2010 .....	39.2
2011 .....	215.0
2012 .....	208.6
2013 .....	202.2
2014 .....	169.3
2015 .....	171.6
2016 .....	173.6
2017 .....	175.5
2018 .....	177.3
2019 .....	179.7
2020 .....	171.5
2021 .....	174.2
2022 .....	176.9
2023 .....	179.9
2024 .....	183.3
2025 .....	186.8
2026 .....	190.3
2027 .....	193.9
2028 .....	197.6
2029 .....	201.3
2030 .....	205.2
2031 .....	209.1
2032 .....	213.1
2033 .....	217.2
2034 .....	221.4
2035 .....	225.7
NPV at 3% .....	2,937.3
NPV at 7% .....	1,633.0

Table IX.F-3 contains more detailed estimated social costs for 2009, when the gas can program begins, 2011, when the gasoline fuel program begins, and 2015, when the gas can fixed costs are fully recovered. The vehicle program applies from 2010 through 2019. According to these results, consumers are expected to bear approximately 99 percent of the cost of the gas can program. This reflects the inelastic price elasticity on the demand side of the market and the elastic price elasticity on the supply side. The burden of the gasoline fuel program is expected to be shared more evenly, with 54.5 percent expected to be borne by consumers and 45.5 percent expected to be borne by producers. In all years, the estimated loss to consumer welfare will be offset somewhat by the fuel savings associated with gas cans. Beginning at about \$11 million per year, these savings increase to about \$70 million by 2015 as compliant gas cans are phased in. These savings accrue for the life of the gas cans.

TABLE IX.F-3.—SUMMARY OF NET SOCIAL COSTS ESTIMATES ASSOCIATED WITH PRIMARY PROGRAM  
[2009, 2011, and 2015—2003\$, \$million]

Market	Change in consumer surplus	Change in producer surplus	Total
<b>2009</b>			
Gasoline U.S.:			
PADD 1 & 3			
PADD 2			
	N/A (gasoline fuel control program begins in 2011)		
PADD 4.			
PADD 5 (w/out CA).			
Gas Cans U.S. ....	-\$48.7 .....	-\$0.3 .....	-\$49.0
	(99.3%) .....	(0.7%)	
States with existing programs .....	-\$7.5 .....	-\$0.1	

TABLE IX.F-3.—SUMMARY OF NET SOCIAL COSTS ESTIMATES ASSOCIATED WITH PRIMARY PROGRAM—Continued  
[2009, 2011, and 2015—2003\$, \$million]

Market	Change in consumer surplus	Change in producer surplus	Total
States without existing programs .....	-\$41.2 .....	-\$0.3 .....	
Subtotal .....	-48.7 .....	-0.3 .....	-\$49.0
	(99.3%) .....	(1%) .....	
Fuel Savings .....	.....	.....	\$10.6
Vehicle Program .....	.....	.....	\$0
California fuel <sup>a</sup> .....	.....	.....	\$0
Total .....	.....	.....	-\$38.4
<b>2011</b>			
Gasoline U.S. ....	-\$100.3 .....	-\$83.6 .....	-\$183.9
PADD 1 & 3 .....	-\$21.6 .....	-\$18.0 .....	
PADD 2 .....	-\$49.1 .....	-\$40.9 .....	
PADD 4 .....	-\$10.2 .....	-\$8.5 .....	
PADD 5 9w/out CA) .....	-\$19.4 .....	-\$16.2 .....	
Gas Cans U.S. ....	-\$50.7 .....	-\$0.3 .....	-\$51.0
	(99.4%) .....	(0.7%) .....	
States with existing programs .....	-\$7.8 .....	-\$0.1 .....	
States without existing programs .....	-\$42.9 .....	-\$0.3 .....	
Subtotal .....	-\$150.9 .....	-\$83.9 .....	-\$234.8
	(64.3%) .....	(35.7%) .....	
Fuel Savings .....	.....	.....	\$33.3
Vehicle Program .....	.....	.....	-\$11.8
California fuel <sup>a</sup> .....	.....	.....	-\$1.7
Total .....	.....	.....	\$215.0
<b>2015</b>			
Gasoline U.S. ....	-\$107.1 .....	-\$89.4 .....	-\$196.5
	(54.5%) .....	(45.5%) .....	
PADD 1 & 3 .....	-\$23.1 .....	-\$19.3 .....	
PADD 2 .....	-\$52.4 .....	-\$43.7 .....	
PADD 4 .....	-\$10.9 .....	-\$9.1 .....	
PADD 5 (w/out CA) .....	-\$20.7 .....	-\$17.3 .....	
Gas Cans U.S. ....	-\$28.5 .....	-\$0.2 .....	-\$28.7
	(99.3%) .....	(0.7%) .....	
States with existing programs .....	-\$2.3 .....	\$0.0 .....	
States without existing programs .....	-\$26.3 .....	-\$0.2 .....	
Subtotal .....	-\$135.7 .....	-\$89.5 .....	-\$225.2
	(60.3%) .....	(39.7%) .....	
Fuel Savings .....	.....	.....	\$68.3
Vehicle Program .....	.....	.....	\$12.9
California fuel <sup>a</sup> .....	.....	.....	-\$1.8
Total .....	.....	.....	\$171.6

<sup>a</sup> California fuel costs are considered separately. See Section 13.1.3 of the RIA.

The present value of net social costs (discounted back to 2005) of the proposed standards through 2035, contained in Table IX-F-2, is estimated to be \$2.9 billion (2003\$). This present value is calculated using a social discount rate of 3 percent and the stream of economic welfare costs from 2009 through 2035. We also performed an analysis using a 7 percent social discount rate.<sup>319</sup> Using that discount

<sup>319</sup> EPA has historically presented the present value of cost and benefits estimates using both a 3 percent and a 7 percent social discount. The 3

rate, the present value of the net social costs through 2035 is estimated to be \$1.6 billion (2003\$).

#### X. Alternative Program Options

We considered several options for fuels, vehicles, and gas cans in developing this proposal.

percent rate represents a demand-side approach and reflects the time preference of consumption (the rate at which society is willing to trade current consumption for future consumption). The 7 percent rate is a cost-side approach and reflects the shadow price of capital.

#### A. Fuels

We considered a wide range of control strategies for gasoline to reduce toxic emissions. Among the options considered are a toxics performance standard, varying levels of benzene control, approaches for controlling other MSATs in addition to benzene, and lower sulfur and RVP for VOC control. The discussion of these options is provided in section VII.

In addition, we request comment on the following specific concepts relating

to the proposed ABT and compliance assurance provisions.

#### 1. Alternative Compliance Assurance Provisions

The design of the proposed ABT program is based on other recent fuel programs (primarily gasoline and diesel sulfur), but with fewer restrictions. The proposed program includes nationwide trading, does not include an upper limit on benzene, and combines all fuel into a single pool for credit accounting purposes. The compliance assurance mechanisms for the proposed ABT program are also based on previous recent fuel programs (including reformulated gasoline and gasoline and diesel sulfur) which in turn were developed based on the experiences in enforcing past fuel programs. At the same time there are other programs with different ABT and corresponding compliance assurance provisions that could serve as models for this benzene proposal, such as the Acid Rain Program.

An overarching concern that today's proposal attempts to address, and that any alternative program also would have to address, is that EPA does not have the resources to audit a substantial number of refineries each year, and certainly not every refinery. Thus, we must devise a credit program whose enforcement integrity does not depend on EPA conducting annual audits of many or most refiners to determine the validity of credits generated, transferred, banked and used.

The program as proposed would provide a great deal of flexibility to refiners in complying with the standards, but balances this flexibility with provisions to ensure the standard's enforceability. This program would also provide incentives for refiners and importers to ensure the validity of any credits they obtain, through the provisions that hold the buyer of invalid credits liable for any resulting violation of the standard. We summarize the most important of these provisions here:

- Credit life would be limited to 5 years. This is intended to provide reasonable assurance that EPA will have the opportunity to review the appropriate records to verify compliance, regardless of personnel changes, whether existing refiners and importers are bought, sold, merged, or go out of business, and whether new refiners and importers are created;
- Records would be required to be retained for the life of the credits to allow for EPA to enforce the benzene content standard through random audits;

- We propose that credits be limited in the number of trades that would be allowed and are requesting comment on the range from 2 to 4 trades. (We will establish an appropriate number of permissible trades in the final rule.) Such a limitation would be intended to allow EPA to have a reasonable chance of verifying the validity of credits that are traded;

- Both the buyer and seller of the credits would be potentially liable should credits be found to be invalid, in order to allow EPA to maintain the environmental benefits of the program should the credit seller no longer be in business; and

- Purchasers of credits would need to be potential credit users, and so would be refiners or importers. Our experiences during the gasoline lead phase-down program in the 1980s, where brokers and others were allowed to take title to lead credits, raised enforcement problems severe enough to call the program's validity into question. These problems have not arisen for more recent programs, where credit purchasers must be credit users.

We request comment on these provisions as a whole and individually. In addition, we note that the proposed benzene program is different from the other recent fuel programs in several key respects that may provide opportunities to design the ABT program and corresponding compliance assurance mechanisms differently. For example, the proposed program would not have an upper limit on the per-gallon benzene concentration that would otherwise force all refiners to ultimately comply with the standard through actual physical refinery changes. Since this proposed program would allow some degree of variation in benzene levels to continue indefinitely, additional flexibility in how credits are handled may be desirable. Thus, we specifically request comment on the following alternate ABT program elements.

As mentioned above, EPA could not, with its limited resources, conduct annual audits of all refiners (and possibly other parties, as discussed below). With regard to any potential alternative ABT program elements, including those discussed below, we request detailed ideas about a potential auditing process that would be sufficiently robust to assure the validity of credits generated, used, banked or traded, including how such audits might be self-funded.

#### Credit Life

EPA notes that a system that limits credit life may, under certain

circumstances, depress the market price of credits and create less incentive for benzene reductions early in the program. EPA therefore requests comment on whether the credit life should be limited or whether unlimited banking should be encouraged through having credits with unlimited life or longer life. We also seek comment on how a program with unlimited credit life could be successfully enforced. For example, EPA audits for refinery compliance with fuel standard and credit requirements normally include review of refinery production, testing and business records. EPA seeks comment on whether these audits could be effectively conducted to review the validity of credits that were generated more than five years previously and whether audits could be effectively concluded during the first five years of a credit's life.

EPA also seeks comment on the appropriate consequences if EPA was unable to verify credit validity, the criteria for identifying credits as being invalid, and whether EPA should have the burden of proving credits were invalid or whether the credit generator (or the credit user) should have the burden of proving that credits were valid. See *Hazardous Waste Treatment Council v. EPA*, 886 F. 2d 355, 367-68 (D.C. Cir. 1990) (relating to circumstances when the burden of proof may permissibly shift to a regulated entity). EPA also seeks comment on mechanisms that would allow companies to verify the validity of credits they generate without the need for EPA audits. Thus, EPA seeks comment on whether audits conducted by independent auditors could be a reliable indicator of credit validity, and if so, the necessary qualifications of the auditor, the criteria for auditor independence, how these qualifications and independence should be established, whether the audit should review records of all company fuels activities related to credit creation or only a random portion of these records, the appropriate timing requirements for these audits, and the nature and timing of reports. EPA seeks comment on the enforcement implications of the Clean Air Act's five-year statute of limitations if credits with a life longer than five years were allowed.

#### Record Retention

We also seek comment on whether a program with unlimited credit life would need to require that the associated records be retained indefinitely until a credit was used. (The use of credits for which no records exist could result in their being declared



null and void since credit validity could not be established.) We seek comment as to whether record-keeping and EPA audits involving activities occurring more than five years in the past could create any issues regarding statutes of limitations. Also, in general, we request comment on provisions that could address the fact that the farther back in time an event occurred, the more difficult it becomes for EPA to conduct an effective audit (due to factors such as mergers, acquisitions, and turnover of personnel). EPA seeks comment on whether the Clean Air Act's five-year statute of limitations would adversely impact EPA's ability to enforce a requirement to keep records longer than five years.

#### Number of Times Credits May Be Traded

As described earlier in this preamble, EPA is requesting comment on allowing credits to be traded between 2 and 4 times. In particular, EPA seeks comment on any specific benefits to regulated parties or to the credit market generally if a number of trades in this range were allowed; on requirements that should be included to ensure the validity of credits that have been transferred multiple times; on procedures for identifying which credits have been transferred if the credit transferor is found to have had in its possession both valid and invalid credits; and on appropriate consequences to the generator and/or transferor of invalid credits. In addition, EPA seeks comment on mechanisms that would allow companies to establish the validity of credits they have purchased without the need for EPA audits. Thus, EPA requests comment on whether companies that obtain credits that have previously been purchased should be required to establish their validity through reports of independent audits of the credit-creation activities of the company that created the credits and of the credit activities of any intermediary entities to which the credits had been transferred.

#### Case-By-Case Relaxation of Compliance Restrictions

In addition to seeking comment on general modifications discussed above to the proposed provisions, we also request comment on allowing regulated entities to petition for case-by-case relaxation of specific provisions in special cases. For example, such a provision might allow a refiner to petition EPA to allow a specific group of credits to be traded one or more additional times than the final rule ultimately allows. Petitioners might also be allowed to request an extension of

the five year limit on credit life. EPA seeks comment on whether and how such an extension might affect the ability to enforce the benzene content standard, including impacts from the statute of limitations. Such an exception might have important implications for enforcement, record-keeping, and emissions, which would have to be adequately addressed. EPA seeks comment on the nature of documentation that would be required in such a petition and criteria that might be used to make a determination regarding approval of such a petition. EPA also seeks comment on the extent to which any such ABT flexibility provisions would be used, and what the benzene content, enforcement, liquidity, and other implications might be.

#### Ownership of Benzene Credits

The potential modifications of the proposed program on which we request comment may be able to be accomplished relatively easily within the bounds of the proposed program. Another concept, allowing traders and other entities to take title to credits, might best be accomplished by moving to an entirely different type of credit program, since it might require a set of other related changes in order to function effectively. For example, it may be possible to design the benzene trading program and related compliance assurance provisions in a manner that would allow benzene credits to be traded on the open market like many other commodities and not unlike the way SO<sub>2</sub> credits are traded under the Acid Rain Program, or how carbon credits are traded through the voluntary trading program established by the Chicago Climate Exchange. We next discuss such an alternate credit program.

The proposed restriction of benzene credit use to refiners and importers does not provide an opportunity for other entities to participate in this credit market by taking title to credits.<sup>320</sup> The inability of traders to take actual title to credits may reduce the ability of the market to function in certain ways including, for example, to hedge against risk effectively or to aggregate small holdings into larger blocks for sale. This might be avoided if the program provided for benzene credits to be owned, and for entities other than

refiners and importers to obtain, hold, and transfer them.

EPA requests comment on any specific benefits to regulated parties or to the credit market generally if non-refiners were allowed to take title to credits. EPA also requests comments on any situations that occurred under other motor vehicle fuels credit programs where the absence of non-refiner credit owners created difficulties or problems in regulated parties being able to transfer or obtain credits. EPA seeks comment on how the benzene credit program could be reliably enforced if non-refiners were allowed to own credits. Thus, EPA seeks comment on the qualifications that should be required for a company to be a non-refiner credit owner, and how these qualifications should be established; on any registration, record keeping, reporting, independent audit and independent attestation requirements that should be imposed on non-refiner owners of credits; and on the nature of liability that should attach to non-refiner owners of credits that were found to have transferred invalid credits.

We expect that such a program would require that all refiners and importers have their credits (and therefore compliance) verified each year. Given the resource needs for EPA to undertake such verifications, we would expect to require refiners to utilize independent auditors, sufficient for the auditor to make a verified audit finding that the company's assertions regarding credit creation are correct. We believe that verification of credits in this manner would require a complete audit of the gasoline production and testing records related to the benzene content and volume of gasoline produced or imported, including reviews and reconciliation of all batch information. The audit also would have to include sufficient review of records of product sales to verify the completeness of the gasoline production records. The independent auditor performing such an audit would have to be qualified to understand and review the records of gasoline production and testing generated at a refinery, or the importation and testing records associated with imported gasoline. To the extent that gasoline testing was conducted by independent laboratories, the credit audit would have to include the activities of the independent laboratory to make an audit finding of the validity of the laboratory test results. EPA would then continue to have the ability to perform spot audits.

EPA seeks comment on whether the regulations should require that these

<sup>320</sup> In the proposed program non-refiners would be allowed to facilitate, or broker, credit transactions between refiners or importers. Thus, a refiner (or importer) that needed to purchase credits could contract with a broker to identify refiners or importers that have credits to sell.

independent audits must be conducted by an independent audit organization that is funded by an industry consortium, rather than by audit firms individually retained by refiners/importers. The industry consortium would submit to EPA for approval: the consortium organization; the qualifications of the individual auditors; the general audit plans, and any audit plans that are specific to an individual company. The audit organization would submit audit reports to EPA and to the companies that were the subject of their audits.

The refiners and importers would then assign a unique serial number to each credit containing key information including the entity's registration number, the year, and the credit number. These entities would then report this information to EPA as a part of their annual compliance report. Credits properly generated under such a program could then be traded freely until they were used. If an audit determined that some credits were improperly generated, a mechanism would be required to decide which credits were considered to be valid and which invalid.

Given EPA's resource constraints, EPA seeks comment on a mechanism that would allow refiners and importers, and non-refiner owners of credits (if allowed) to conduct this detailed tracking of individual credits, with reconciliation of the reports of all parties transferring, obtaining, or holding credits. Thus, EPA seeks comment on whether the regulations should include an option whereby companies that wish to sell, purchase or hold verified credits would fund an independent organization that would function as the clearinghouse of benzene credits. EPA also seeks comment on how such an independent organization option should be structured: What would be the qualifications of the organization and how would they be established; how would the method of operations of the organization be established and approved by EPA; what reporting by companies to the organization would be required, and what reporting to EPA by the organization would be required; and how would the organization establish the validity of credits that are the subject of reports from companies.

In addition, as in past programs, if credits were later found to be improperly created, the party that generated the invalid credits and the party that used the invalid credits would be subject to EPA enforcement. The party using the invalid credits would be required to remove the invalid

credits from its compliance calculations. If this recalculation resulted in a violation of the benzene standard, the party would be subject to an enforcement action for this violation, regardless of whether the invalid credits were purchased in good faith (although the party may be permitted to remedy such violations through the subsequent purchase of valid credits). This is intended to maintain the environmental benefits of the program and to encourage self-policing by the industry of the validity of the credits they use for compliance. However, in this situation EPA would look first to the generator of the invalid credits to remedy the shortfall. If this generator could make up any credit deficit, EPA normally would defer enforcement against the user or intermediary transferor of invalid credits.

## 2. Alternative ABT Options

EPA seeks comment on whether the regulations should create two options for benzene credits: one that is based on the credit enforcement provisions contained in the proposed fuels program, resulting in credits with more limited credit life that must be transferred from the credit generator to the credit user; and "verified" benzene credits that have a longer credit life and that can be owned by companies other than refiners/importers. Under this approach, benzene credits could be "verified" if certain conditions are met. First, the credit generator would need to participate in an audit consortium (as described above) and the credits would need to be verified through an audit conducted by this organization. Second, the credit generator and any other company that took title to or used these credits would need to participate in a benzene credit clearing house (as described above). In this way, companies that wished to generate benzene credits with longer life and broader ownership options could do so, but also would bear at least part of the expense associated with establishing the validity and tracking the movements of this class of credits. At the same time, companies that wished to generate and transfer credits in the traditional manner, would not bear these extra expenses.

EPA also seeks comment on an approach that would allow refiners and importers, and non-refiner owners of credits (if allowed), to establish a private clearing house to conduct the detailed tracking of individual credits, with reconciliation of the reports of all parties transferring, obtaining, or holding credits. The Chicago Climate Exchange provides an example of a

privately established trading program. The Chicago Climate Exchange provides a trading platform with a registry for credits and clearing facility. The NASD provides market surveillance and verification of emission credits. EPA seeks comment on how such an independent organization could be established; what requirements should EPA establish for the organization; what reporting would be required by companies to the organization; and what reporting would be required by the organization to EPA.

We request comment on the appropriateness of such an alternative ABT program for the proposed benzene control program and how it might work and be enforced.

## B. Vehicles

For vehicles, we considered normal temperature standards more stringent than Tier 2 standards, which would likely entail hardware changes to Tier 2 vehicles. This option is discussed in section VI. We did not consider a less stringent standard for cold temperature NMHC control because CAA sections 202(a) and 202(l) require us to establish the most stringent standards achievable considering cost and other factors. We believe that the proposed cold NMHC standards and phase-in for Tier 2 vehicles satisfy these CAA requirements, and a less stringent standard would not.

## C. Gas Cans

For gas cans, as discussed in section VIII, we are proposing an emissions performance standard we believe reflects the performance of the best available control technologies. We considered but are not proposing options for design-based requirements, including requirements for automatic shut-off spouts. We also considered but are not proposing retrofit requirements for gas cans. These options are discussed in sections VIII.B.3–VIII.B.5.

## XI. Public Participation

We request comment on all aspects of this proposal. This section describes how you can participate in this process.

### A. How Do I Submit Comments?

We are opening a formal comment period by publishing this document. We will accept comments during the period indicated under **DATES** above. If you have an interest in the proposed emission control program described in this document, we encourage you to comment on any aspect of this rulemaking. We also request comment on specific topics identified throughout this proposal.

Your comments will be most useful if you include appropriate and detailed supporting rationale, data, and analysis. Commenters are especially encouraged to provide specific suggestions for any changes to any aspect of the regulations that they believe need to be modified or improved. You should send all comments, except those containing proprietary information, to our Air Docket (see **ADDRESSES**) before the end of the comment period.

You may submit comments electronically, by mail, or through hand delivery/courier. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your comment. Please ensure that your comments are submitted within the specified comment period. Comments received after the close of the comment period will be marked "late." EPA is not required to consider these late comments. If you wish to submit CBI or information that is otherwise protected by statute, please follow the instructions in section XI.B.

#### *B. How Should I Submit CBI to the Agency?*

Do not submit information that you consider to be CBI electronically through the electronic public docket, [www.regulations.gov](http://www.regulations.gov), or by e-mail. Send or deliver information identified as CBI only to the following address: U.S. Environmental Protection Agency, Assessment and Standards Division, 2000 Traverwood Drive, Ann Arbor, MI 48105, Attention Docket ID EPA-HQ-OAR-2005-0036. You may claim information that you submit to EPA as CBI by marking any part or all of that information as CBI (if you submit CBI on disk or CD ROM, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

In addition to one complete version of the comment that includes any information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. If you submit the copy that does not contain CBI on disk or CD ROM, mark the outside of the disk or CD ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

#### *C. Will There Be a Public Hearing?*

We will hold a public hearing on April 12, 2006 at the Sheraton Crystal City Hotel, 1800 Jefferson Davis Highway, Arlington, Virginia 22202, Telephone: (703) 486-1111. The hearing will start at 10 a.m. local time and continue until everyone has had a chance to speak.

If you would like to present testimony at the public hearing, we ask that you notify the contact person listed under **FOR FURTHER INFORMATION CONTACT** at least ten days before the hearing. You should estimate the time you will need for your presentation and identify any needed audio/visual equipment. We suggest that you bring copies of your statement or other material for the EPA panel and the audience. It would also be helpful if you send us a copy of your statement or other materials before the hearing.

We will make a tentative schedule for the order of testimony based on the notifications we receive. This schedule will be available on the morning of the hearing. In addition, we will reserve a block of time for anyone else in the audience who wants to give testimony.

We will conduct the hearing informally, and technical rules of evidence won't apply. We will arrange for a written transcript of the hearing and keep the official record of the hearing open for 30 days to allow you to submit supplementary information. You may make arrangements for copies of the transcript directly with the court reporter.

#### *D. Comment Period*

The comment period for this rule will end on May 30, 2006.

#### *E. What Should I Consider as I Prepare My Comments for EPA?*

You may find the following suggestions helpful for preparing your comments:

- Explain your views as clearly as possible.
- Describe any assumptions that you used.
- Provide any technical information and/or data you used that support your views.
- If you estimate potential burden or costs, explain how you arrived at your estimate.
- Provide specific examples to illustrate your concerns.
- Offer alternatives.
- Make sure to submit your comments by the comment period deadline identified.
- To ensure proper receipt by EPA, identify the appropriate docket

identification number in the subject line on the first page of your response. It would also be helpful if you provided the name, date, and **Federal Register** citation related to your comments.

## **XII. Statutory and Executive Order Reviews**

### *A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines a "significant regulatory action" as one that is likely to result in a rule that may:

- Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, Local, or Tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action" because estimated annual costs of this rulemaking are estimated to be over \$100 million per year and it raises novel legal or policy issues. A draft Regulatory Impact Analysis has been prepared and is available in the docket for this rulemaking and at the docket internet address listed under **ADDRESSES** above. This action was submitted to the Office of Management and Budget for review under Executive Order 12866. Written comments from OMB and responses from EPA to OMB comments are in the public docket for this rulemaking.

### *B. Paperwork Reduction Act*

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The Agency proposes to collect information to ensure compliance with the provisions in this rule. This includes a variety of

requirements, both for vehicle manufacturers, fuel producers, and portable gasoline container manufacturers. Information-collection requirements related to vehicle manufacturers are in EPA ICR #0783.50 (OMB Control Number 2060-0104); requirements related to fuel producers are in EPA ICR #1591.20 (OMB Control Number 2060-0277); requirements related to portable gasoline container manufacturers are in EPA ICR #2213.01. For vehicle and fuel standards, section 208(a) of the Clean Air Act requires that manufacturers provide information the Administrator may reasonably require to determine compliance with the regulations; submission of the information is therefore mandatory. We will consider confidential all

information meeting the requirements of section 208(c) of the Clean Air Act. For portable gasoline container standards, recordkeeping and reporting requirements for manufacturers would be pursuant to the authority of sections 183(e) and 111 of the Clean Air Act.

As shown in Table XII.B-1, the total annual burden associated with this proposal is about 24,696 hours and \$2,771,309, based on a projection of 225 respondents. The estimated burden for vehicle manufacturers and fuel producers is a total estimate for both new and existing reporting requirements. The portable gasoline container requirements represent our first regulation of gas cans, so those burden estimates reflect only new reporting requirements. Burden means

the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

TABLE XII.B-1.—ESTIMATED BURDEN FOR REPORTING AND RECORDKEEPING REQUIREMENTS

Industry sector	Number of respondents	Annual burden hours	Annual costs
Vehicles .....	35	770	\$80,900
Fuels .....	185	23,710	2,677,410
Gas Cans .....	5	216	12,999
Total .....	225	24,696	2,771,309

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this rule, which includes this ICR, under Docket ID number EPA-HQ-OAR-2005-0036. Submit any comments related to the ICR for this proposed rule to EPA and OMB. See ADDRESSES section at the beginning of this notice for where to submit comments to EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725

17th Street, NW., Washington, DC 20503, "Attention: Desk Office for EPA." Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after March 29, 2006, a comment to OMB is best assured of having its full effect if OMB receives it by April 28, 2006. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

*C. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.*

1. Overview

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any

other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201 (see table below); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. The following table provides an overview of the primary SBA small business categories potentially affected by this regulation:

Industry	Defined as small entity by SBA if less than or equal to	NAICS codes <sup>a</sup>
Light-duty vehicles:		
—Vehicle manufacturers (including small volume manufacturers).	1,000 employees .....	336111
—Independent commercial importers .....	\$6 million annual sales .....	811111, 811112, 811198
—Alternative fuel vehicle converters .....	100 employees .....	424720
	1,000 employees .....	335312
	\$6 million annual sales .....	811198
Gasoline fuel refiners .....	1500 employees <sup>b</sup> .....	324110

Industry	Defined as small entity by SBA if less than or equal to	NAICS codes <sup>a</sup>
Portable fuel container manufacturers:		
—Plastic container manufacturers .....	500 employees .....	326199
—Metal gas can manufacturers .....	1,000 employees .....	332431

## Notes:

<sup>a</sup>North American Industrial Classification System.

<sup>b</sup>EPA has included in past fuels rulemakings a provision that, in order to qualify for EPA's small refiner flexibilities, a refiner must also produce no greater than 155,000 bpcd crude capacity.

## 2. Background

Mobile sources emit air toxics that can cause cancer and other serious health effects (Section III of this preamble and Chapter 1 of the Regulatory Impact Analysis (RIA) for this rule describe these compounds and their health effects). Mobile sources contribute significantly to the nationwide risk from breathing outdoor sources of air toxics. In today's action we are proposing: standards to limit the exhaust hydrocarbons from passenger vehicles during cold temperature operation; evaporative hydrocarbon emissions standards for passenger vehicles; limiting the average annual benzene content of gasoline; and hydrocarbon emissions standards for gas cans that would reduce evaporation, permeation, and spillage from these containers. (Detailed discussion of each of these programs is in sections VI, VII, and VIII of the preamble and Chapters 5, 6, and 7 of the RIA). We are proposing the standards for vehicles and gasoline under section 202(l)(2) of the Clean Air Act (CAA), which directs EPA to establish requirements to control emissions of mobile source air toxics (MSATs) from new motor vehicles and fuels. Controls for gas cans are being pursued under CAA section 183(e), the provisions applying to consumer and commercial products.

Pursuant to section 603 of the RFA, EPA prepared an initial regulatory flexibility analysis (IRFA) that examines the impact of the proposed rule on small entities along with regulatory alternatives that could reduce that impact. The IRFA, as summarized below, is available for review in the docket and Chapter 14 of the RIA.

As required by section 609(b) of the RFA, as amended by SBREFA, EPA also conducted outreach to small entities and convened a Small Business Advocacy Review Panel to obtain advice and recommendations of representatives of the small entities that potentially would be subject to the rule's requirements.

Consistent with the RFA/SBREFA requirements, the Panel evaluated the assembled materials and small-entity comments on issues related to elements of the IRFA. A copy of the Panel report

is included in the docket for this proposed rule, and a summary of the Panel process, and subsequent Panel recommendations, is summarized below.

## 3. Summary of Regulated Small Entities

The following section discusses the small entities directly regulated by this proposed rule.

## a. Highway Light-Duty Vehicles

In addition to the major vehicle manufacturers, three distinct categories of businesses relating to highway light-duty vehicles would be covered by the new vehicle standards: small volume manufacturers (SVMs), independent commercial importers (ICIs), and alternative fuel vehicle converters. SVMs are companies that sell less than 15,000 vehicles per year, as defined in past EPA regulations, and this status allows vehicle models to be certified under a slightly simpler certification process. Independent commercial importers are companies that hold a Certificate (or certificates) of Conformity permitting them to alter imported vehicles to meet U.S. emission standards. Alternative fuel vehicle converters are businesses that convert gasoline or diesel vehicles to operate on alternative fuel, and converters must seek a certificate for all of their vehicle models. Based on a preliminary assessment, EPA identified about 14 SVMs, 10 alternative fuel vehicle converters, and 10 ICIs. Of these, EPA believes 5 SVMs, 6 converters, and all 10 ICIs would meet the small-entity criteria as defined by SBA (no major vehicle manufacturers meet the small-entity criteria). EPA estimates that these small entities comprise about 0.02 percent of the total light-duty vehicle sales in the U.S. for the year 2004.

## b. Gasoline Refiners

EPA's current assessment is that 15 refiners meet SBA's criterion of having 1,500 employees or less. It should be noted that because of the dynamics in the refining industry (i.e., mergers and acquisitions) and decisions by some refiners to enter or leave the gasoline market, the actual number of refiners that ultimately qualify for small refiner

status under an MSAT program could be much different than these initial estimates. Current data further indicates that these refiners produce about 2.5 percent of the total gasoline pool.

## c. Portable Gasoline Container Manufacturers

EPA conducted a preliminary industry profile to identify the manufacturers of portable gasoline containers (gas cans)—98 percent are plastic containers and 2 percent are metal gas cans. Using this industry profile, EPA identified 4 domestic manufacturers and 1 foreign manufacturer. Of these 4 U.S. manufacturers, 3 meet the SBA definition of a small entity. One small business accounted for over 50 percent of the U.S. sales in 2002, and the other small entities comprised about 10 percent of U.S. sales.

## 4. Potential Reporting, Record Keeping, and Compliance

For highway light-duty vehicles, EPA is proposing to continue the reporting, recordkeeping, and compliance requirements prescribed for this category in 40 CFR 86. Key among these requirements are certification requirements and provisions related to reporting of production, emissions information, flexibility use, etc.

For any fuel control program, EPA must have assurance that fuel produced by refiners meets the applicable standard, and that the fuel continues to meet the standard as it passes downstream through the distribution system to the ultimate end user. EPA expects that recordkeeping, reporting and compliance provisions of the proposed rule will be fairly consistent with those in place today for other fuel programs. For example, reporting would likely involve requiring that refiners submit pre-compliance reports updating EPA on their plans to meet the MSAT standards.

For gas cans, there currently are not federal emission control requirements, and thus, EPA is proposing new reporting and record keeping requirements for gas can manufacturers that would be subject to the proposed standards. EPA is proposing

requirements that would be similar to those in the California program, such as submitting emissions testing information, reporting of certification families, and use of transition provisions.

#### 5. Relevant Federal Rules

We are aware of a few other current or proposed Federal rules that are related to the upcoming proposed rule. The primary federal rules that are related to the proposed MSAT rule under consideration are the first MSAT rule (**Federal Register** Vol. 66, p. 17230, March 29, 2001), the Tier 2 Vehicle/Gasoline Sulfur rulemaking (**Federal Register** Vol. 65, p. 6698, February 10, 2000), the fuel sulfur rules for highway diesel (**Federal Register** Vol. 66, p. 5002, January 18, 2001) and nonroad diesel (**Federal Register** Vol. 69, p. 38958, June 29, 2004), and the Cold Temperature Carbon Monoxide Rulemaking (**Federal Register** Vol. 57, p. 31888, July 17, 1992).

In addition, the Evaporative Emissions Streamlining Direct Final Rulemaking was issued on December 8, 2005 (**Federal Register** Vol. 70, p. 72917). For gas cans, OSHA has safety regulations for gasoline containers used in workplace settings. Cans meeting OSHA requirements, commonly called safety cans, are exempt from the California program, and we are planning to exempt them from the EPA program.

Section 1501 of the Energy Policy Act of 2005 requires the Agency to implement a Renewable Fuels Standard (RFS) program. Beginning in 2006, this program will require increasing volumes of renewable fuel to be used in gasoline, until a total of 7.5 billion gallons is required in 2012. The most prevalent renewable fuel is expected to be ethanol. There are a wide variety of potential impacts of ethanol blending on MSAT emissions that will be evaluated as part of the RFS rulemaking process. In general, as ethanol use increases, other sources of octane in gasoline can decrease. Depending on these changes, the impact on benzene emissions will vary. The specific effects of ethanol on benzene will be addressed in the Regulatory Impact Analysis (RIA) to this rule and in future rulemakings, such as the RFS rule.

#### 6. Summary of SBREFA Panel Process and Panel Outreach

##### a. Significant Panel Findings

The Small Business Advocacy Review Panel (SBAR Panel, or the Panel) considered many regulatory options and flexibilities that would help mitigate potential adverse effects on small

businesses as a result of this rule. During the SBREFA Panel process, the Panel sought out and received comments on the regulatory options and flexibilities that were presented to SERs and Panel members. The major flexibilities and hardship relief provisions that were recommended by the Panel are described below and are also located in Section 9 of the SBREFA Final Panel Report which is available in the public docket.

##### b. Panel Process

As required by section 609(b) of the RFA, as amended by SBREFA, we also conducted outreach to small entities and convened an SBAR Panel to obtain advice and recommendations of representatives of the small entities that potentially would be subject to the rule's requirements.

On September 7, 2005, EPA's Small Business Advocacy Chairperson convened a Panel under Section 609(b) of the RFA. In addition to the Chair, the Panel consisted of the Division Director of the Assessment and Standards Division of EPA's Office of Transportation and Air Quality, the Chief Counsel for Advocacy of the Small Business Administration, and the Administrator of the Office of Information and Regulatory Affairs within the Office of Management and Budget. As part of the SBAR Panel process, we conducted outreach with representatives from the various small entities that would be affected by the proposed rulemaking. We met with these Small Entity Representatives (SERs) to discuss the potential rulemaking approaches and potential options to decrease the impact of the rulemaking on their industries. We distributed outreach materials to the SERs; these materials included background on the rulemaking, possible regulatory approaches, and possible rulemaking alternatives. The Panel met with SERs from the industries that will be directly affected by the MSAT rule on September 27, 2005 (gasoline refiners) and September 29, 2005 (light-duty vehicles and portable gasoline containers) to discuss the outreach materials and receive feedback on the approaches and alternatives detailed in the outreach packet (the Panel also met with SERs on July 19, 2005 for an initial outreach meeting). The Panel received written comments from the SERs following the meeting in response to discussions had at the meeting and the questions posed to the SERs by the Agency. The SERs were specifically asked to provide comment on regulatory alternatives that could help to minimize the rule's impact on small businesses.

In general, SERs representing the gas can manufacturers industry raised concerns on how the MSAT rule's requirements would be coordinated with the California program and other requirements, and that there should be adequate opportunity for sell through at the start of the program. The small volume manufacturer, ICI, and vehicle converter SERs that participated had questions about the form of the new standards for light-duty vehicles, specifically testing and certification requirements. The gasoline refiner SERs generally stated that they believed that small refiners would face challenges in meeting a new standard. More specifically, they raised the concern that the rule could be very costly and dependence on credits may not be a comfortable situation; they were also concerned about the timing of the standards for this rule, given other upcoming fuel standards.

The Panel's findings and discussions were based on the information that was available during the term of the Panel and issues that were raised by the SERs during the outreach meetings and in their comments. It was agreed that EPA should consider the issues raised by the SERs (and discussions had by the Panel itself) and that EPA should consider comments on flexibility alternatives that would help to mitigate any negative impacts on small businesses. Alternatives discussed throughout the Panel process included those offered in previous or current EPA rulemakings, as well as alternatives suggested by SERs and Panel members, and the Panel recommended that all be considered in the development of the rule. Though some of the flexibilities suggested may be appropriate to apply to all entities affected by the rulemaking, the Panel's discussions and recommendations were focused mainly on the impacts, and ways to mitigate adverse impacts, on small businesses. A summary of these recommendations is detailed below, and a full discussion of the regulatory alternatives and hardship provisions discussed and recommended by the Panel can be found in the SBREFA Final Panel Report. A complete discussion of the transition and hardship provisions that we are proposing in today's action can be found in Sections VI.E, VII.E, and VIII (vehicle, fuels, and gas can sections) of this preamble. Also, the Panel Report includes all comments received from SERs (Appendices D and E of the Report) and summaries of the two outreach meetings that were held with the SERs (Appendices B and C). In accordance with the RFA/SBREFA requirements, the Panel evaluated the

aforementioned materials and SER comments on issues related to the Initial Regulatory Flexibility Analysis (IRFA). The following sections describe the Panel recommendations from the SBAR Panel Report.

### c. Small Business Flexibilities

The Panel recommended that EPA consider and seek comment on a wide range of regulatory alternatives to mitigate the impacts of the rulemaking on small businesses, including those flexibility options described below. As previously stated, the following discussion is a summary of the SBAR Panel recommendations; our proposals regarding these recommendations are located in earlier sections of this rule preamble.

#### i. Highway Light-Duty Vehicles

##### (a) Highway Light-Duty Vehicle Flexibilities

For certification purposes (and for the sake of simplicity for Panel discussions regarding flexibility options), SVMs include ICIs and alternative fuel vehicle converters since they sell less than 15,000 vehicles per year. Similar to the flexibility provisions implemented in the Tier 2 rule, the Panel recommended that we allow SVMs (includes all vehicle small entities that would be affected by this rule, which are the majority of SVMs) the following flexibility options for meeting cold temperature VOC standards and evaporative emission standards:

For cold VOC standards, the Panel recommended that SVMs simply comply with the standards with 100 percent of their vehicles during the last year of the 4 year phase-in period. For example, if the standard for light-duty vehicles and light light-duty trucks (0 to 6,000 pounds GVWR) were to begin in 2010 and end in 2013 (25%, 50%, 75%, 100% phase-in over 4 years), the SVM provision would be 100 percent in 2013. If the standard for heavy light-duty trucks and medium-duty passenger vehicles (greater than 6,000 pounds GVWR) were to start in 2012 (25%, 50%, 75%, 100% phase-in over 4 years), the SVM provision would be 100 percent in 2015.

In regard to evaporative emission standards, the Panel recommended that since the evaporative emissions standards will not have phase-in years, we allow SVMs to simply comply with standards during the third year of the program (we have implemented similar provisions in past rulemakings). For a 2009 start date for light-duty vehicles and light light-duty trucks, SVMs would need to meet the evaporative emission

standards in 2011. For a 2010 implementation date for heavy light-duty trucks and medium-duty passenger vehicles, SVMs would need to comply in 2012.

##### (b) Highway Light-Duty Vehicle Hardships

In addition, the Panel recommended that hardship flexibility provisions be extended to SVMs for the cold temperature VOC and evaporative emission standards. The provisions that the Panel recommended are:

SVMs would be allowed to apply (EPA would need to review and approve application) for up to an additional 2 years to meet the 100 percent phase-in requirements for cold VOC and the delayed requirement for evaporative emissions. Appeals for such hardship relief must be made in writing, must be submitted before the earliest date of noncompliance, must include evidence that the noncompliance will occur despite the manufacturer's best efforts to comply, and must include evidence that severe economic hardship will be faced by the company if the relief is not granted.

#### ii. Gasoline Refiners

##### (a) Gasoline Refiner Flexibilities

The Panel recommended that EPA propose certain provisions to encourage early compliance with lower benzene standards. The Panel recommended that EPA propose that small refiners be afforded the following flexibility options to help mitigate the impacts on small refiners:

*Delay in Standards*—The Panel recommended that a four-year delay period be proposed for small refiners. A four-year delay would be needed in order to allow for a review of the ABT program, as discussed below, to occur one year after implementation but still three years prior to the small refiner compliance deadline. It was noted by the small refiners that three years are generally needed for small refiners to obtain financing and perform engineering and construction. The Panel was also in support of allowing for refinery expansion within the delay option, and recommended that refinery expansion be provided for in the rule.

*Early ABT Credits*—The Panel recommended that early credit generation be afforded to small refiners that take some steps to meet the benzene requirement prior to the effective date of the standard. Depending on the start date of the program, and coupled with the four-year delay option, a small refiner could have a total credit generation period of five to seven years.

The Panel was also in support of allowing refiners (small, as well as non-small, refiners) to generate credits for reductions to their benzene emissions levels, rather than credits only for meeting the benzene standard that is set by the rule.

The Panel recommended a review of the credit trading program and small refiner flexibility options one year after the general program starts. Such a review could take into account the number of early credits generated, as well as the number of credits generated and sold during the first year of the program. Further, a review after the first year of the program would still provide small refiners with the three years that it was suggested would be needed for these refiners to obtain financing and perform engineering and construction for benzene reduction equipment. Should the review conclude that changes to either the program or the small refiner provisions are necessary, the Panel recommended that EPA also consider some of the suggestions provided by the small refiners (their comments are located in Appendix E of the Final Panel Report), such as:

- The general MSAT program should require pre-compliance reporting (similar to EPA's highway and nonroad diesel rules);

- Following the review, EPA should revisit the small refiner provisions if it is found that the credit trading market does not exist, or if credits are only available at a cost that would not allow small refiners to purchase credits for compliance;

- The review should offer ways either to help the credit market, or help small refiners gain access to credits (e.g., EPA could "create" credits to introduce to the market, EPA could impose additional requirements to encourage trading with small refiners, etc.).

In addition, the Panel recommended that EPA consider in this rulemaking establishing an additional hardship provision to assist those small refiners that cannot comply with the MSAT with a viable credit market. (This suggested hardship provision was also suggested by the small refiners in their comments, located in Appendix E of the Final Panel Report). This hardship provision could address concerns that, for some small refineries, compliance may be technically feasible only through the purchase of credits and it may not be economically feasible to purchase those credits. This flexibility could be provided to a small refiner on a case-by-case basis following the review and based on a summary, by the refiner, of technical or financial infeasibility (or some other type of similar situation that

would render its compliance with the standard difficult). This hardship provision might include further delays and/or a slightly relaxed standard on an individual refinery basis for a duration of two years; in addition, provision might allow the refinery to request, and EPA grant, multiple extensions of the flexibility until the refinery's material situation changes. The Panel also stated that it understood that EPA may need to modify or rescind this provision, should it be implemented, based on the results of the program review.

#### (b) Gasoline Refiner Hardships

During the Panel process, we stated that we intended to propose the extreme unforeseen circumstances hardship and extreme hardship provisions (for all gasoline refiners and importers), similar to those in prior fuels programs. A hardship based on extreme unforeseen circumstances is intended to provide short term relief due to unanticipated circumstances beyond the control of the refiner, such as a natural disaster or a refinery fire; an extreme hardship is intended to provide short-term relief based on extreme circumstances (e.g., extreme financial problems, extreme operational or technical problems, etc.) that impose extreme hardship and thus significantly affect a refiner's ability to comply with the program requirements by the applicable dates. The Panel agreed with the proposal of such provisions and recommended that we include them in the MSAT rulemaking.

#### iii. Portable Gasoline Containers

##### (a) Portable Gasoline Container Flexibilities

Since nearly all gas can manufacturers are small entities and they account for about 60 percent of sales, the Panel planned to extend the flexibility options to all gas can manufacturers. Moreover, implementation of the program would be much simpler by doing so. The recommended flexibilities are the following:

*Design Certification*—The Panel recommended that we propose to permit gas can manufacturers to use design certification in lieu of running any or all of the durability aging cycles. Manufacturers could demonstrate the durability of their gas cans based in part on emissions test data from designs using the same permeation barriers and materials. Under a design-based certification program a manufacturer would provide evidence in the application for certification that their container would meet the applicable standards based on its design (e.g., use of a particular permeation barrier). The

manufacturer would submit adequate engineering and other information about its individual design such that EPA could determine that the emissions performance of their individual design would not be negatively impacted by slosh, UV exposure, and/or pressure cycling (whichever tests the manufacturer is proposing to not run prior to emissions testing).

*Broaden Certification Families*—This approach would relax the criteria used to determine what constitutes a certification family. It would allow small businesses to limit their certification families (and therefore their certification testing burden), rather than testing all of the various size containers in a manufacturer's product line. Some small entities may be able to put all of their various size containers into a single certification family. Manufacturers would then certify their containers using the "worst case" configuration within the family. To be grouped together, containers would need to be manufactured using the same materials and processes even though they are of different sizes.

*Additional Lead-time*—Since it may take additional time for the gas can SERs to gather information to fully evaluate whether or not additional lead-time is needed beyond the 2009 start date, the Panel recommended that we discuss lead-time in the proposal and request comments on the need for additional lead-time to allow manufacturers to ramp up to a nationwide program.

*Product Sell-through*—As with past rulemakings for other source sectors, the Panel recommended that EPA propose to allow normal sell through of gas cans as long as manufacturers do not create stockpiles of noncomplying gas cans prior to the start of the program.

##### (b) Portable Gasoline Container Hardships

The Panel recommended that EPA propose two types of hardship programs for small gas can manufacturers. These provisions are:

Allow small manufacturers to petition EPA for limited additional lead-time to comply with the standards. A manufacturer would have to make the case that it has taken all possible business, technical, and economic steps to comply but the burden of compliance costs would have a significant adverse effect on the company's solvency. Hardship relief could include requirements for interim emission reductions. The length of the hardship relief would be established during the initial review and would likely need to be reviewed annually thereafter.

Permit small manufacturers to apply for hardship relief if circumstances outside their control cause the failure to comply (i.e. supply contract broken by parts supplier) and if failure to sell the subject containers would have a major impact on the company's solvency. The terms and timeframe of the relief would depend on the specific circumstances of the company and the situation involved. As part of its application, a company would be required to provide a compliance plan detailing when and how it would achieve compliance with the standards under both types of hardship relief.

We invite comments on all aspects of the proposal and its impacts on small entities.

#### D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising



small governments on compliance with the regulatory requirements.

This rule contains no federal mandates for state, local, or tribal governments as defined by the provisions of Title II of the UMR. The rule imposes no enforceable duties on any of these governmental entities. Nothing in the rule would significantly or uniquely affect small governments. EPA has determined that this rule contains federal mandates that may result in expenditures of more than \$100 million to the private sector in any single year. EPA believes that the proposal represents the least costly, most cost-effective approach to achieve the statutory requirements of the rule. The costs and benefits associated with the proposal are discussed above and in the Draft Regulatory Impact Analysis, as required by the UMR.

#### *E. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with representatives of various State and local governments in developing this rule. EPA has also consulted representatives from STAPPA/ALAPCO, which represents state and local air pollution officials.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

#### *F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications."

This proposed rule does not have tribal implications as specified in Executive Order 13175. This rule will be implemented at the Federal level and impose compliance costs only on vehicle manufacturers (includes alternative fuel vehicle converters and ICIs), fuel producers, and portable gasoline container manufacturers. Tribal governments will be affected only to the extent they purchase and use regulated vehicles, fuels, and portable gasoline containers. Thus, Executive Order 13175 does not apply to this rule. EPA specifically solicits additional comment on this proposed rule from tribal officials.

#### *G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks*

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, section 5-501 of the Order directs the Agency to evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is subject to the Executive Order because it is an economically significant regulatory action as defined by Executive Order 12866, and we believe that by addressing the environmental health or safety risk, this action may have a disproportionate beneficial effect on children. Accordingly, we have evaluated the potential environmental health or safety effects of VOC and toxics emissions from gasoline-fueled mobile sources and gas cans on children. The results of this evaluation are described below and contained in section IV.

Exposure to a number of the compounds addressed in this rule may have a disproportionate effect on children. First, exposure to carcinogens that cause cancer through a mutagenic mode of action during childhood development may have an incrementally disproportionate impact. Because of their small size, increased activity, and increased ventilation rates compared to adults, children may have greater exposure to these compounds in the ambient air, on a unit body weight basis. Moreover, for PM, because children's breathing rates are higher, their exposures may be higher and because their respiratory systems are still developing, children may be more susceptible to problems from exposure to respiratory irritants. The public is invited to submit or identify peer-reviewed studies and data, of which EPA may not be aware, that assessed results of early life exposure to the pollutants addressed by this rule.

#### *H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. If promulgated, the gasoline benzene provisions of the proposed rule would shift about 22,000 barrels per day of benzene from the gasoline market to the petrochemical market. This volume represents about 0.2 percent of nationwide gasoline production. The actual impact of the rule on the gasoline market, however, is likely to be less due to offsetting changes in the production of petrochemicals, as well as expected growth in the petrochemical market absent this rule. The major sources of benzene for the petrochemical market other than reformat from gasoline production are also derived from gasoline components or gasoline feedstocks. Consequently, the expected shift toward more benzene production from reformat due to this proposed rule would be offset by less benzene produced from other gasoline feedstocks.

The rule would require refiners to use a small additional amount of energy in processing gasoline to reduce benzene levels, primarily due to the increased energy used for benzene extraction. Our modeling of increased energy use indicates that the process energy used by refiners to produce gasoline would increase by about one percent. Overall,

we believe that the proposed rule would result in no significant adverse energy impacts.

The proposed gasoline benzene provisions would not affect the current gasoline distribution practices.

We discuss our analysis of the energy and supply effects of the proposed gasoline benzene standard further in section IX of this preamble and in Chapter 9 of the Regulatory Impact Analysis.

The fuel supply and energy effects described above would be offset substantially by the positive effects on gasoline supply and energy use of the proposed gas can standards also proposed in today's action. These proposed provisions would greatly reduce the gasoline lost to evaporation from gas cans. This would in turn reduce the demand for gasoline, increasing the gasoline supply and reducing the energy used in producing gasoline.

#### *I. National Technology Transfer Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The proposed rulemaking involves technical standards. Therefore, the Agency conducted a search to identify potentially applicable voluntary consensus standards. However, we identified no such standards. Therefore, for the cold temperature NMHC standards, EPA proposes to use the existing EPA cold temperature CO test procedures (manufacturers currently measure hydrocarbon emissions with current cold CO test procedures), which were adopted in a previous EPA rulemaking (1992). The fuel standards referenced in today's proposed rule involve the measurement of gasoline fuel parameters. The measurement standards for gasoline fuel parameters referenced in today's proposal are government-unique standards that were developed by the Agency through previous rulemakings. Both the cold

temperature CO test procedures and the measurement standards for gasoline fuel parameters have served the Agency's emissions control goals well since their implementation and have been well accepted by industry. For gas cans, EPA is proposing new procedures for measuring hydrocarbon emissions.

EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

#### *J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order 12898 directs Federal agencies to "determine whether their programs, policies, and activities have disproportionately high adverse human health or environmental effects on minority populations" (sections 3-301 and 3-302). In developing this proposed rule, EPA assessed environmental justice issues that may be relevant to this proposal (see section IV of this proposed rule and chapter 3 of the Draft Regulatory Impact Analysis).

The proposed rule would reduce VOC and toxics emissions from gasoline-fueled mobile sources (particularly highway light-duty vehicles) and gas cans, and thus, it would decrease the amount of air pollution to which the entire population is exposed. EPA evaluated the population residing close to high traffic density (near roadways), and we found that this population has demographic differences from the general population, including a greater fraction of lower income and minority residents. Since the proposed rule would reduce emissions from roadways, those living nearby (more likely to be lower income and minority residents) are likely to have a disproportionate benefit from the proposed rule. Thus, this proposed rule does not have a disproportionately high adverse human health or environmental effect on minority populations.

#### **XIII. Statutory Provisions and Legal Authority**

Statutory authority for the fuels controls proposed in today's document can be found in sections 202 and 211(c) of the Clean Air Act (CAA), as amended, 42 U.S.C. sections 7521 and 7545(c). Additional support for the procedural and enforcement-related aspects of the fuel controls in today's proposal, including the proposed recordkeeping requirements, come from sections 114(a)

and 301(a) of the CAA, 42 U.S.C. sections 7414(a) and 7601(a).

Statutory authority for the vehicle controls proposed in this document can be found in sections 202, 206, 207, 208, and 301 of the CAA, 42 U.S.C. sections 7521, 7525, 7541, 7542 and 7601.

Statutory authority for the portable gasoline container controls proposed in today's document can be found in sections 183(e) and 111, 42 U.S.C. sections 7511b(e) and 7411.

#### **List of Subjects**

##### *40 CFR Part 59*

Environmental protection, Administrative practice and procedure, Confidential business information, Incorporation by reference, Labeling, Consumer or Commercial Products pollution, Penalties, Reporting and recordkeeping requirements.

##### *40 CFR Part 80*

Environmental protection, Air pollution control, Fuel additives, Gasoline, Imports, Incorporation by reference, Labeling, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements.

##### *40 CFR Part 85*

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Labeling, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements, Research, Warranties.

##### *40 CFR Part 86*

Environmental protection, Administrative practice and procedure, Confidential business information, Incorporation by reference, Labeling, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements.

Dated: February 28, 2006.

**Stephen L. Johnson,**  
*Administrator.*

For the reasons set forth in the preamble, parts 59, 80, 85 and 86 of title 40 of the Code of Federal Regulations are proposed to be amended as follows:

#### **PART 59—NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR CONSUMER AND COMMERCIAL PRODUCTS**

1. The authority citation for part 59 continues to read as follows:

**Authority:** 42 U.S.C. 7414 and 7511b(e).

2. Subpart F is added to part 59 to read as follows:

## Subpart F—Control of Evaporative Emissions From New and In-Use Portable Gasoline Containers

Sec.

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- 59.600 Does this subpart apply for my products?  
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 59.603 How must manufacturers apply good engineering judgment?  
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 59.699 How do I request a hearing?

## Subpart F—Control of Evaporative Emissions From New and In-Use Portable Gasoline Containers

### Overview and Applicability

#### § 59.600 Does this subpart apply for my products?

(a) Except as provided in § 59.605 and paragraph (b) and (c) of this section, the regulations in this subpart F apply for all portable gasoline containers (defined in § 59.680) beginning January 1, 2009.

(b) See § 59.602(a) and (b) to determine how to apply the provisions of this subpart for containers that were manufactured before January 1, 2009.

#### § 59.601 Do the requirements of this subpart apply to me?

(a) Unless specified otherwise in this subpart, the requirements and prohibitions of this subpart apply to all manufacturers and importers of portable gasoline containers. Certain prohibitions in § 59.602 apply to all other persons.

(b) New portable gasoline containers that are subject to the emissions standards of this part must be covered by a certificate of conformity that is issued to the manufacturer of the container. If more than one person meets the definition of manufacturer for a portable gasoline container, see § 59.621 to determine if you are the manufacturer who may apply for and receive a certificate of conformity.

(c) Unless specifically noted otherwise, the term "you" means manufacturers, as defined in § 59.680.

#### § 59.602 What are the general prohibitions and requirements of this subpart?

(a) *General prohibition for manufacturers and importers.* No manufacturer or importer may sell, offer for sale, introduce or deliver for introduction into commerce in the United States, or import any new portable gasoline container that is subject to the emissions standards of this subpart and is manufactured after December 31, 2008 unless it is covered by a valid certificate of conformity, it is labeled as required, and it complies with all of the applicable requirements of this subpart, including complies with the emissions standards for its useful life. After June 30, 2009, no manufacturer or importer may sell, offer for sale, introduce into commerce in the United States, or import any new portable gasoline container that was manufactured prior to January 1, 2009.

(b) *General prohibition for wholesale distributors.* No wholesale distributor

may sell, offer for sale, or distribute any portable gasoline container that is subject to the emissions standards of this subpart and is manufactured after December 31, 2008 unless it is covered by a valid certificate of conformity and is labeled as required. After December 31, 2009, no wholesale distributor may sell, offer for sale, or distribute any portable gasoline container that was manufactured prior to January 1, 2009. After December 31, 2009, all new portable gasoline containers shall be deemed to be manufactured after December 31, 2008 unless they are in retail inventory.

(c) *Reporting and recordkeeping.* (1) You must keep the records and submit the reports specified in § 59.628. Records must be retained for at least 5 years from the date of manufacture or importation and must be supplied to EPA upon request.

(2) No person may alter, destroy, or falsify any record or report required by this subpart.

(d) *Testing and access to facilities.* You may not keep us from entering your facility to test inspect if we are authorized to do so. Also, you must perform the tests we require (or have the tests done for you). Failure to perform this testing is prohibited.

(e) *Warranty.* You may not fail to offer, provide notice of, or honor the emissions warranty required under this subpart.

(f) *Replacement components.* No person may sell, offer for sale, introduce or deliver for introduction into commerce in the United States, import, or install any replacement component for portable gasoline containers subject to the standards of this subpart where the component has the effect of disabling, bypassing, or rendering inoperative the emissions controls of the containers.

(g) *Violations.* If a person violates any prohibition or requirement of this subpart or the Act concerning portable gasoline containers, it shall be considered a separate violation for each portable gasoline container.

(h) *Assessment of penalties and injunctions.* We may assess administrative penalties, bring a civil action to assess and recover civil penalties, bring a civil action to enjoin and restrain violations, or bring criminal action as provided by the Clean Air Act.

#### § 59.603 How must manufacturers apply good engineering judgment?

(a) In addition to other requirements and prohibitions set forth in this subpart, you must use good engineering judgment for decisions related to any requirements under this subpart. This

includes your applications for certification, any testing you do to show that your portable gasoline containers comply with requirements that apply to them, and how you select, categorize, determine, and apply these requirements.

(b) Upon request, you must provide EPA a written description of the engineering judgment in question. Such information must be provided within 15 working days unless EPA specifies a different period of time to respond.

(c) We may reject your decision if it is not based on good engineering judgment or is otherwise inconsistent with the requirements that apply, and we may:

(1) Suspend, revoke, or void a certificate of conformity if we determine you used incorrect or incomplete information or failed to consider relevant information, or that your decision was not based on good engineering judgment; or

(2) Notify you that we believe any aspect of your application or other information submission may be incorrect or invalid due to lack of good engineering judgment or other cause. Unless a different period of time is specified, you will have 30 days to respond to our notice and specifically address our concerns. After considering your information, we will notify regarding our finding, which may include the actions provided in paragraph (c)(1) of this section.

(d) If you disagree with our conclusions under paragraph (c) of this section, you may file a request for a hearing with the Designated Compliance Officer as described in § 59.699. In your request, you must specifically state your objections, and include relevant data or supporting analysis. The request must be signed by your authorized representative. If we agree that your request raises a substantial factual issue, we will hold the hearing according to § 59.699.

**§ 59.605 What portable gasoline containers are excluded from this subpart's requirements?**

This section describes exclusions that apply to certain portable gasoline containers. The prohibitions and requirements of this subpart do not apply for containers excluded under this section. Exclusions under this section are based on inherent characteristics of the containers. See § 59.660 for exemptions that apply based on special circumstances.

(a) Containers approved as safety cans consistent with the requirements of Title 29, part 1926, subpart F, of the Code of Federal Regulations (29 CFR

1926.150 through 1926.152) are excluded. Such cans generally have a flash-arresting screens, spring-closing lids and spout covers and have been approved by a nationally recognized testing laboratory such as Factory Mutual Engineering Corp., Underwriters' Laboratories, Inc., or Federal agencies such as Bureau of Mines, or U.S. Coast Guard.

(b) Containers with a nominal capacity of less than 0.25 gallons or more than 10.0 gallons are excluded.

(c) Containers designed and marketed solely to deliver fuel directly to nonroad engines during engine operation, such as containers with a connection for a fuel line and a reserve fuel area, are considered to be nonroad fuel tanks, and are thus excluded.

**§ 59.607 Submission of information.**

(a) You are responsible for all statements you make to us related to this subpart F, including information not required during certification. You are required to provide truthful and complete information. This subpart describes the consequences of failing to meet this obligation. The consequences also may include prosecution under 18 U.S.C. 1001 and 42 U.S.C. 7431(c)(2).

(b) We may require an officer or authorized representative of your company with knowledge of the other information contained in the submittal to approve and sign any submission of information to us, and to certify that all of the information submitted is accurate and complete.

**Emission Standards and Related Requirements**

**§ 59.611 What evaporative emission requirements apply under this subpart?**

(a) Emissions from portable gasoline containers may not exceed 0.30 grams per gallon per day when measured with the test procedures in §§ 59.650 through 59.653. This procedure measures diurnal venting emissions and permeation emissions.

(b) For the purpose of this section, portable gasoline containers include spouts, caps, gaskets, and other parts provided with the container.

(c) The following general requirements also apply for all portable gasoline containers subject to the standards of this subpart:

(1) *Prohibited controls.* You may not design your emission-control systems so that they cause or contribute to an unreasonable risk to public health, welfare, or safety while operating. You may not design your portable gasoline containers to have adjustable parameters unless the containers will meet all the requirements of this subpart when

adjusted anywhere within the physically adjustable range. You may not equip your portable gasoline containers with a defeat device, or intentionally produce your containers to enable the use of a defeat device. A defeat device is an element of design (either original or replacement) that is not approved in advance by EPA and that reduces the effectiveness of emission controls under conditions that the portable gasoline containers may reasonably be expected to encounter during normal use.

(2) *Leaks.* You must design and manufacture your containers to be free of leaks. This requirement applies when your container is upright, partially inverted, or completely inverted.

(3) *Refueling.* You are required to design your portable gasoline containers to minimize spillage during refueling to the extent practical. This requires that you use good engineering judgment to avoid designs that will make it difficult to refuel typical vehicle and equipment designs without spillage.

(d) Portable gasoline containers must meet the standards and requirements specified in this subpart throughout the useful life of the container. The useful life of the container is five years beginning on the date of sale to the ultimate purchaser.

**§ 59.612 What emission-related warranty requirements apply to me?**

(a) *General requirements.* You must warrant to the ultimate purchaser that the new portable gasoline container, including all parts of its evaporative emission-control system, is:

(1) Designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this subpart.

(2) Is free from defects in materials and workmanship that may keep it from meeting these requirements.

(b) *Warranty notice and period.* Your emission-related warranty must be valid for a minimum of one year from the date of sale to the ultimate purchaser.

(c) *Notice.* You must provide a warranty notice with each container.

**§ 59.613 What operation and maintenance instructions must I give to buyers?**

You must provide the ultimate purchaser of the new portable gasoline container written instructions for properly maintaining and using the emission-control system.

**§ 59.615 How must I label and identify the portable gasoline containers I produce?**

This section describes how you must label your portable gasoline containers.

(a) At the time of manufacture, indelibly mark the month and year of manufacture on each container.

(b) Mold into or affix a legible label identifying each portable gasoline container. The label must be:

(1) Attached so it is not easily removable.

(2) Secured to a part of the container that can be easily viewed when the can is in use, not on the bottom of the container.

(3) Written in English.

(c) The label must include:

(1) The heading "EMISSION CONTROL INFORMATION".

(2) Your full corporate name and trademark.

(3) A standardized identifier such as EPA's standardized designation for the emission families, the model number, or the part number.

(4) This statement: "THIS CONTAINER COMPLIES WITH U.S. EPA EMISSION REGULATIONS FOR PORTABLE GASOLINE CONTAINERS.".

(d) You may add information to the emission control information label to identify other emission standards that the container meets or does not meet (such as California standards). You may also add other information to ensure that the portable gasoline container will be properly maintained and used.

(e) You may request EPA to approve modified labeling requirements in this subpart F if you show that it is necessary or appropriate. We will approve your request if your alternate label is consistent with the requirements of this subpart.

(f) You may identify the name and trademark of another company instead of their own on your emission control information label, subject to the following provisions:

(1) You must have a contractual agreement with the other company that obligates that company to take the following steps:

(i) Meet the emission warranty requirements that apply under § 59.612. This may involve a separate agreement involving reimbursement of warranty-related expenses.

(ii) Report all warranty-related information to the certificate holder.

(2) In your application for certification, identify the company whose trademark you will use and describe the arrangements you have made to meet your requirements under this section.

(3) You remain responsible for meeting all the requirements of this subpart.

## Certifying Emission Families

### § 59.621 Who may apply for a certificate of conformity?

A certificate of conformity may only be issued to the manufacturer that completes the construction of the portable gasoline container. In unusual circumstances, upon a petition by a manufacturer, we may allow another manufacturer of the container to hold the certificate of conformity. However, in order to hold the certificate, the manufacturer must demonstrate day-to-day ability to ensure that containers produced under the certificate will comply with the requirements of this subpart.

### § 59.622 What are the general requirements for obtaining a certificate of conformity and producing portable gasoline containers under it?

(a) You must send us a separate application for a certificate of conformity for each emission family. A certificate of conformity for containers is valid from the indicated effective date until the end of the production period for which it is issued. EPA may require new certification prior to the end of the production period if EPA finds that containers are not meeting the standards in use during their useful life.

(b) The application must be written in English and contain all the information required by this subpart and must not include false or incomplete statements or information (see § 59.629).

(c) We may ask you to include less information than we specify in this subpart, as long as you maintain all the information required by § 59.628.

(d) You must use good engineering judgment for all decisions related to your application (see § 59.603).

(e) An authorized representative of your company must approve and sign the application.

(f) See § 59.629 for provisions describing how we will process your application.

(g) You may ask us to modify specific provisions for demonstrating compliance with the requirements of this subpart if they cannot be met for your portable gasoline container. We may approve your request if we determine that such a change is consistent with the intent of this subpart. We will not approve your request if it might lead to less effective emission control or prevent us from ensuring compliance with the requirements of this subpart. To make a request, describe in writing which provision you are unable to meet, why you are unable to meet it, and how the provision should be modified to address your concern.

(h) If we approve your application, we will issue a certificate that will allow you to produce the containers that you described in your application for a specified production period. Certificates do not allow you to produce containers that were not described in your application, unless we approve the additional containers under § 59.624.

### § 59.623 What must I include in my application?

This section specifies the information that must be in your application, unless we ask you to include less information under § 59.622(c). We may require you to provide additional information to evaluate your application.

(a) Describe the emission family's specifications and other basic parameters of the emission controls. List each distinguishable configuration in the emission family. Include descriptions and part numbers for all detachable components such as spouts and caps.

(b) Describe and explain the method of emission control.

(c) Describe the products you selected for testing and the reasons for selecting them.

(d) Describe the test equipment and procedures that you used, including any special or alternate test procedures you used (see § 59.650).

(e) List the specifications of the test fuel to show that it falls within the required ranges specified in § 59.650 of this subpart.

(f) Include the maintenance and use instructions and warranty information you will give to the ultimate purchaser of each new portable gasoline container (see § 59.613).

(g) Describe your emission control information label (see § 59.615).

(h) State that your product was tested as described in the application (including the test procedures, test parameters, and test fuels) to show you meet the requirements of this subpart.

(i) Present emission data to show your products meet the applicable emission standards. Where applicable, §§ 59.626 and 59.627 may allow you to submit an application in certain cases without new emission data.

(j) Report all test results, including those from invalid tests or from any other tests, whether or not they were conducted according to the test procedures of §§ 59.650 through 59.653. We may ask you to send other information to confirm that your tests were valid under the requirements of this subpart.

(k) Unconditionally certify that all the products in the emission family comply with the requirements of this subpart,

other referenced parts of the CFR, and the Clean Air Act.

(l) Include estimates of U.S.-directed production volumes.

(m) Include the information required by other sections of this subpart.

(n) Include other relevant information, including any additional information requested by EPA.

(o) Name an agent for service of process located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by EPA or otherwise by the United States related to the requirements of this subpart.

#### **§ 59.624 How do I amend my application for certification?**

Before we issue you a certificate of conformity, you may amend your application to include new or modified configurations, subject to the provisions of this section. After we have issued your certificate of conformity, you may send us an amended application requesting that we include new or modified configurations within the scope of the certificate, subject to the provisions of this section. You must amend your application if any changes occur with respect to any information included in your application.

(a) You must amend your application before you take either of the following actions:

(1) Add a configuration to an emission family. In this case, the configuration added must be consistent with other configurations in the emission family with respect to the criteria listed in § 59.625.

(2) Change a configuration already included in an emission family in a way that may affect emissions, or change any of the components you described in your application for certification. This includes production and design changes that may affect emissions any time during the portable gasoline containers' lifetime.

(b) To amend your application for certification, send the Designated Compliance Officer the following information:

(1) Describe in detail the addition or change in the configuration you intend to make.

(2) Include engineering evaluations or data showing that the amended emission family complies with all applicable requirements. You may do this by showing that the original emission data are still appropriate with respect to showing compliance of the amended family with all applicable requirements.

(3) If the original emission data for the emission family are not appropriate to

show compliance for the new or modified configuration, include new test data showing that the new or modified configuration meets the requirements of this subpart.

(c) We may ask for more test data or engineering evaluations. You must give us these within 30 days after we request them.

(d) For emission families already covered by a certificate of conformity, we will determine whether the existing certificate of conformity covers your new or modified configuration. You may ask for a hearing if we deny your request (see § 59.699).

(e) For emission families already covered by a certificate of conformity and you send us a request to amend your application, you may sell and distribute the new or modified configuration before we make a decision under paragraph (d) of this section, subject to the provisions of this paragraph. If we determine that the affected configurations do not meet applicable requirements, we will notify you to cease production of the configurations and any containers from the new or modified configuration will not be considered covered by the certificate. In addition, we may require you to recall any affected containers that you have already distributed, including those sold to the ultimate purchasers. Choosing to produce containers under this paragraph (e) is deemed to be consent to recall all containers that we determine do not meet applicable emission standards or other requirements and to remedy the nonconformity at no expense to the owner. If you do not provide information required under paragraph (c) of this section within 30 days, you must stop producing the new or modified containers.

#### **§ 59.625 How do I select emission families?**

(a) Divide your product line into families of portable gasoline containers that are expected to have similar emission characteristics throughout the useful life.

(b) Group containers in the same emission family if they are the same in all the following aspects:

(1) Type of material (including pigments, plasticizers, UV inhibitors, or other additives).

(2) Production method.

(3) Spout design.

(4) Gasket material/design.

(5) Emission control strategy.

(c) You may subdivide a group of containers that is identical under paragraph (b) of this section into different emission families if you show

the expected emission characteristics are different.

(d) You may group containers that are not identical with respect to the things listed in paragraph (b) of this section in the same emission family if you show that their emission characteristics will be similar throughout their useful life.

#### **§ 59.626 What emission testing must I perform for my application for a certificate of conformity?**

This section describes the emission testing you must perform to show compliance with the emission standards in § 59.611.

(a) Test your products using the procedures and equipment specified in §§ 59.650 through 59.653.

(b) Select an emission-data unit from each emission family for testing. You must test a production sample or a preproduction product that will represent actual production. Select the configuration that is most likely to exceed (or have emissions nearest to) the applicable emission standard. For example, for a family of multilayer portable gasoline containers, test the container with the thinnest barrier layer. Test 3 identical containers.

(c) We may measure emissions from any of your products from the emission family. You must supply your products to us if we choose to perform confirmatory testing.

(d) You may ask to use emission data from a previous production period (carryover) instead of doing new tests, but only if the emission-data from the previous production period remains the appropriate emission-data unit under paragraph (b) of this section. For example, you may not carryover emission data for your family of containers if you have added a thinner-walled container than was tested previously.

(e) We may require you to test a second unit of the same or different configuration in addition to the unit tested under paragraph (b) of this section.

(f) If you use an alternate test procedure under § 59.652 and later testing shows that such testing does not produce results that are equivalent to the procedures specified in this subpart, we may reject data you generated using the alternate procedure and base our compliance determination on the later testing.

#### **§ 59.627 How do I demonstrate that my emission family complies with evaporative emission standards?**

(a) For purposes of certification, your emission family is considered in compliance with an evaporative

emission standard in § 59.611(a) if the test results from all portable gasoline containers in the family that have been tested show measured emissions levels that are at or below the applicable standard.

(b) Your emissions family is deemed not to comply if any container representing that family has test results showing an official emission level above the standard.

(c) Round the measured emission level to the same number of decimal places as the emission standard. Compare the rounded emission levels to the emission standard.

**§ 59.628 What records must I keep and what reports must I send to EPA?**

(a) Organize and maintain the following records:

(1) A copy of all applications and any summary information you send us.

(2) Any of the information we specify in § 59.623 that you were not required to include in your application.

(3) A detailed history of each emission-data unit. For each emission data unit, include all of the following:

(i) The emission-data unit's construction, including its origin and buildup, steps you took to ensure that it represents production containers, any components you built specially for it, and all the components you include in your application for certification.

(ii) All your emission tests, including documentation on routine and standard tests, as specified in §§ 59.650 through 59.653, and the date and purpose of each test.

(iii) All tests to diagnose emission-control performance, giving the date and time of each and the reasons for the test.

(iv) Any other relevant events or information.

(4) Production figures for each emission family divided by assembly plant.

(5) If you identify your portable gasoline containers by lot number or other identification numbers, keep a record of these numbers for all the containers you produce under each certificate of conformity.

(b) Keep data from routine emission tests (such as test cell temperatures and relative humidity readings) for one year after we issue the associated certificate of conformity. Keep all other information specified in paragraph (a) of this section for five years after we issue your certificate.

(c) Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

(d) Send us copies of any maintenance instructions or explanations if we ask for them.

(e) Send us an annual warranty report summarizing by emissions family successful warranty claims under § 59.612, including the reason for the claim. You must submit the report by July 1 for the preceding calendar year.

**§ 59.629 What decisions may EPA make regarding my certificate of conformity?**

(a) If we determine your application is complete and shows that the emission family meets all the requirements of this subpart and the Act, we will issue a certificate of conformity for your emission family for the specified production period. We may make the approval subject to additional conditions.

(b) We may deny your application for certification if we determine that your emission family fails to comply with emission standards or other requirements of this subpart or the Act. Our decision may be based on a review of all information available to us. If we deny your application, we will explain why in writing.

(c) In addition, we may deny your application or suspend, revoke, or void your certificate if you do any of the following:

(1) Refuse to comply with any testing or reporting requirements.

(2) Submit false or incomplete information.

(3) Render inaccurate any test data.

(4) Deny us from completing authorized activities despite our presenting a warrant or court order (see § 59.698). This includes a failure to provide reasonable assistance.

(5) Produce portable gasoline containers for importation into the United States at a location where local law prohibits us from carrying out authorized activities.

(6) Fail to supply requested information or amend your application to include all portable gasoline containers being produced.

(7) Take any action that otherwise circumvents the intent of the Act or this subpart.

(d) If we deny your application or suspend, revoke, or void your certificate, you may ask for a hearing (see § 59.699).

**§ 59.630 EPA testing.**

We may test any portable gasoline container subject to the standards of this subpart.

(a) *Certification and production sample testing.* Upon our request, a manufacturer must supply a prototype container or a reasonable number of

production samples to us for verification testing. These samples will generally be tested using the full test procedure of § 59.653.

(b) *In-use testing.* We may test in-use containers using the test procedure of § 59.653 without preconditioning.

**§ 59.650 General testing provisions.**

(a) The test procedures of this subpart are addressed to you as a manufacturer, but they apply equally to anyone who does testing for you.

(b) Unless we specify otherwise, the terms "procedures" and "test procedures" in this subpart include all aspects of testing, including the equipment specifications, calibrations, calculations, and other protocols and procedural specifications needed to measure emissions.

(c) The specification for gasoline to be used for testing is given in 40 CFR 1065.210. Use the grade of gasoline specified for general testing. Blend this grade of gasoline with reagent grade ethanol in a volumetric ratio of 90.0 percent gasoline to 10.0 percent ethanol. You may use ethanol that is less pure if you can demonstrate that it will not affect your ability to demonstrate compliance with the applicable emission standards.

(d) Accuracy and precision of all temperature measurements must be  $\pm 2.2$  °C or better.

(e) Accuracy and precision of mass balances must be sufficient to ensure accuracy and precision of two percent or better for emission measurements for products at the maximum level allowed by the standard. The readability of the display may not be coarser than half of the required accuracy and precision.

**§ 59.652 Other procedures.**

(a) *Your testing.* The procedures in this subpart apply for all testing you do to show compliance with emission standards, with certain exceptions listed in this section.

(b) *Our testing.* These procedures generally apply for testing that we do to determine if your portable gasoline containers complies with applicable emission standards. We may perform other testing as allowed by the Act.

(c) *Exceptions.* We may allow or require you to use procedures other than those specified in this subpart in the following cases.

(1) You may request to use special procedures if your portable gasoline containers cannot be tested using the specified procedures. We will approve your request if we determine that it would produce emission measurements that represent in-use operation and we determine that it can be used to show

compliance with the requirements of the standard-setting section.

(2) You may ask to use emission data collected using other procedures, such as those of the California Air Resources Board. We will approve this only if you show us that using these other procedures do not affect your ability to show compliance with the applicable emission standards. This generally requires emission levels to be far enough below the applicable emission standards so that any test differences do not affect your ability to state unconditionally that your containers will meet all applicable emission standards when tested using the specified test procedures.

(3) You may request to use alternate procedures that are equivalent to allowed procedures, or more accurate or more precise than allowed procedures.

(d) You may not use other procedures under paragraph (c) of this section until we approve your request.

#### **§ 59.653 How do I test portable gasoline containers?**

You must test the portable gasoline container as described in your application, with the applicable spout and cap attached. Tighten fittings in a manner representative of how they would be tightened by a typical user.

(a) *Preconditioning for durability.* Complete the following steps at the start of testing, unless we determine that omission of one or more of these durability steps will not affect the emissions from your container.

(1) *Pressure cycling.* Perform a pressure test by sealing the container and cycling it between +13.8 and -1.7 kPa (+2.0 and -0.5 psig) and back to +13.8 kPa for 10,000 cycles at a rate of 60 seconds per cycle.

(2) *UV exposure.* Perform a sunlight-exposure test by exposing the container to an ultraviolet light of at least 24 W/m<sup>2</sup> (0.40 W-hr/m<sup>2</sup>/min) on the container surface for at least 450 hours. Alternatively, the container may be exposed to direct natural sunlight for an equivalent period of time, as long as you ensure that the container is exposed to at least 450 daylight hours.

(3) *Slosh testing.* Perform a slosh test by filling the portable gasoline container to 40 percent of its capacity with the fuel specified in paragraph (e) of this section and rocking it at a rate of 15 cycles per minute until you reach one million total cycles. Use an angle deviation of +15° to -15° from level. This test must be performed at a temperature of 28 °C ± 5°C.

(4) *Spout actuation.* Perform the following spout actuation and inversion

steps at the end on the slosh testing, and at the end of the preconditioning soak.

(i) Perform one complete actuation/inversion cycle per day for ten days.

(ii) One actuation/inversion cycle consists of the following steps:

(A) Remove and replace the spout to simulate filling the container.

(B) Slowly invert the container and keep it inverted for at least 5 seconds to ensure that the spout and mechanisms become saturated with fuel. Any fuel leaking from any part of the container will denote a leak and will be reported as part of certification. Once completed, place the container on a flat surface in the upright position.

(C) Actuate the spout by fully opening and closing without dispensing fuel. The spout must return to the closed position without the aid of the operator (e.g., pushing or pulling the spout closed). Repeat for a total of 10 actuations. If at any point the spout fails to return to the closed position, the container fails the test.

(D) Repeat the step contained in paragraph (a)(4)(ii)(B) of this section (i.e., the inversion step).

(E) Repeat the steps contained in paragraph (a)(4)(ii)(C) of this section (i.e., ten actuations).

(b) *Preconditioning fuel soak.* Complete the following steps before a diurnal emission test: (1) Fill the portable gasoline container with the specified fuel to its nominal capacity, seal it using the spout, and allow it to soak at 28 ± 5 °C for at least 20 weeks. You are not required to soak the container for more than 20 weeks unless it has been determined that a longer soak period is needed to achieve a stabilized emissions rate. Alternatively, the container may be soaked for a shorter period of time at a higher temperature if you can show that the hydrocarbon permeation rate has stabilized. You may count the time of the slosh testing as part of the 20 weeks. (2) Pour the fuel out of the container and immediately refill to 50 percent of nominal capacity. Be careful to not spill any fuel on the container. Wipe the outside of the container as needed to remove any liquid fuel that may have spilled on it.

(3) Seal the container using the spout and cap assemblies that will be used to seal the openings in a production container. Leave other openings on the container (such as vents) open unless they are automatically closing and unlikely for the user to leave open during typical storage.

(c) *Reference container.* A reference tank is required to correct for buoyancy effects that may occur during testing. Prepare the reference tank as follows:

(1) Obtain a second tank that is identical to the test tank. You may not use a tank that has previously contained fuel or any other contents that might affect the stability of its mass.

(2) Fill the reference tank with enough dry sand (or other inert material) so that the mass of the reference tank is approximately the same as the test tank when filled with fuel. Use good engineering judgment to determine how similar the mass of the reference tank needs to be to the mass of the test tank considering the performance characteristics of your balance.

(3) Ensure that the sand (or other inert material) is dry. This may require heating the tank or applying a vacuum to it.

(4) Seal the tank.

(d) *Diurnal test run.* To run the test, take the steps specified in this paragraph (d) for a portable gasoline container that was preconditioned as specified in paragraph (a) of this section.

(1) Stabilize the fuel temperature within the portable gasoline container at 22.2 °C. Vent the container at this point to relieve any positive or negative pressure that may have developed during stabilization.

(2) Weigh the sealed reference container and record the weight. Place the reference on the balance and tare it so that it reads zero. Place the sealed test portable gasoline container on the balance and record the difference between the test container and the reference container. This value is  $M_{\text{initial}}$ . Take this measurement within 8 hours of filling the test container with fuel as specified in paragraph (b)(2) of this section.

(2) Immediately place the portable gasoline container within a well ventilated, temperature-controlled room or enclosure. Do not spill or add any fuel.

(3) Close the room or enclosure.

(4) Follow the temperature profile in the following table for all portable gasoline containers. Use good engineering judgment to follow this profile as closely as possible. You may use linearly interpolated temperatures or a spline fit for temperatures between the hourly setpoints.



TABLE 1 OF § 59.653.—DIURNAL TEMPERATURE PROFILE FOR PORTABLE GASOLINE CONTAINERS

Time (hours)	Ambient Temperature (C) Profile for Portable Gasoline Containers
0	22.2
1	22.5
2	24.2
3	26.8
4	29.6
5	31.9
6	33.9
7	35.1
8	35.4
9	35.6
10	35.3
11	34.5
12	33.2
13	31.4
14	29.7
15	28.2
16	27.2
17	26.1
18	25.1
19	24.3
20	23.7
21	23.3
22	22.9
23	22.6
24	22.2

(5) At the end of the diurnal period, retare the balance using the reference container and weigh the portable gasoline container. Record the difference in mass between the reference container and the test. This value is  $M_{final}$

(6) Subtract  $M_{final}$  from  $M_{initial}$ ; and divide the difference by the nominal capacity of the container (using at least three significant figures) to calculate the g/gallon/day emission rate:

$$\text{Emission rate} = (M_{initial} - M_{final}) / (\text{nominal capacity}) / (\text{one day})$$

(7) Round your result to the same number of decimal places as the emission standard.

(8) Instead of determining emissions by weighing the container before and after the diurnal temperature cycle, you may place the container in a SHED meeting the specifications of 40 CFR 86.107–96(a)(1) and measure emissions directly. Immediately following the stabilization in paragraph (d)(1) of this section, purge the SHED and follow the temperature profile from paragraph (d)(4) of this section. Start measuring emissions when you start the temperature profile.

(e) For metal containers, you may demonstrate for certification that your portable gasoline containers comply with the evaporative emission standards without performing the pre-soak or

container durability cycles (i.e., the pressure cycling, UV exposure, and slosh testing) specified in this section. For other containers, you may demonstrate compliance without performing the durability cycles specified in this section only if we approve it after you have presented data clearly demonstrating that the cycle or cycles do not negatively impact the permeation rate of the materials used in the containers.

**Special Compliance Provisions**

**§ 59.660 Exemption from the standards.**

In certain circumstances, we may exempt portable gasoline containers from the evaporative emission standards and requirements of § 59.611 and the prohibitions and requirements of § 59.602. You do not need an exemption for any containers that you own but do not sell, offer for sale, introduce or deliver for introduction into U.S. commerce, or import into the United States. Submit your request for an exemption to the Designated Compliance Officer.

(a) Portable gasoline containers that are intended for export only and are in fact exported are exempt provided they are clearly labeled as being for export only. Keep records for five years of all portable gasoline containers that you manufacture for export. Any introduction into U.S. commerce for any purpose other than export is considered to be a violation of § 59.602 by the manufacturer. You do not need to request this exemption.

(b) You may ask us to exempt portable gasoline containers that you will purchase, sell, or distribute for the sole purpose of testing them.

(c) You may ask us to exempt portable gasoline containers for the purpose of national security, as long as your request is endorsed by an agency of the federal government responsible for national defense. In your request, explain why you need the exemption.

(d) You may ask us to exempt containers that are designed and marketed solely for rapidly refueling racing applications which are designed to create a leak proof seal with the target tank or are designed to connect with a receiver installed on the target tank. This exemption is generally intended for containers used to rapidly refuel a race car during a pit stop and similar containers. In your request, explain how why these containers are unlikely to be used for nonracing applications. We may limit these exemptions to those applications that are allowed to use gasoline exempted under 40 CFR 80.200.

(e) EPA may impose reasonable conditions on any exemption, including a limit on the number of containers that are covered by an exemption.

**§ 59.662 What temporary provisions address hardship due to unusual circumstances?**

(a) After considering the circumstances, we may permit you to introduce into commerce exempt you from the evaporative emission standards and requirements of § 59.611 of this subpart and the prohibitions and requirements of § 59.602 for specified portable gasoline containers that do not comply with emission standards if all the following conditions apply:

(1) Unusual circumstances that are clearly outside your control and that could not have been avoided with reasonable discretion prevent you from meeting requirements from this subpart.

(2) You exercised prudent planning and were not able to avoid the violation; you have taken all reasonable steps to minimize the extent of the nonconformity.

(3) Not having the exemption will jeopardize the solvency of your company.

(4) No other allowances are available under the regulations in this chapter to avoid the impending violation.

(b) To apply for an exemption, you must send the Designated Officer a written request as soon as possible before you are in violation. In your request, show that you meet all the conditions and requirements in paragraph (a) of this section.

(c) Include in your request a plan showing how you will meet all the applicable requirements as quickly as possible.

(d) You must give us other relevant information if we ask for it.

(e) We may include reasonable additional conditions on an approval granted under this section, including provisions to recover or otherwise address the lost environmental benefit or paying fees to offset any economic gain resulting from the exemption.

(f) We may approve extensions of up to one year. We may review and revise an extension as reasonable under the circumstances.

(g) Add a legible label, written in block letters in English, to a readily visible part of each container exempted under this section. This label must prominently include at least the following items:

(1) Your corporate name and trademark.

(2) The statement “EXEMPT UNDER 40 CFR 59.662.”.

**§ 59.663 What are the provisions for extending compliance deadlines for manufacturers under hardship?**

(a) After considering the circumstances, we may extend the compliance deadline for you to meet new emission standards, as long as you meet all the conditions and requirements in this section.

(b) To apply for an extension, you must send the Designated Compliance Officer a written request. In your request, show that all the following conditions and requirements apply:

(1) You have taken all possible business, technical, and economic steps to comply.

(2) Show that the burden of compliance costs prevents you from meeting the requirements of this subpart by the required compliance date.

(3) Not having the exemption will jeopardize the solvency of your company.

(4) No other allowances are available under the regulations in this subpart to avoid the impending violation.

(c) In describing the steps you have taken to comply under paragraph (b)(1) of this section, include at least the following information:

(1) Describe your business plan, showing the range of projects active or under consideration.

(2) Describe your current and projected financial standing, with and without the burden of complying in full with the applicable regulations in this subpart by the required compliance date.

(3) Describe your efforts to raise capital to comply with regulations in this subpart.

(4) Identify the engineering and technical steps you have taken or plan to take to comply with regulations in this subpart.

(5) Identify the level of compliance you can achieve. For example, you may be able to produce containers that meet a somewhat less stringent emission standard than the regulations in this subpart require.

(d) Include in your request a plan showing how you will meet all the applicable requirements as quickly as possible.

(e) You must give us other relevant information if we ask for it.

(f) An authorized representative of your company must sign the request and include the statement: "All the information in this request is true and accurate, to the best of my knowledge."

(g) Send your request for this extension at least nine months before the relevant deadline.

(h) We may include reasonable requirements on an approval granted

under this section, including provisions to recover or otherwise address the lost environmental benefit. For example, we may require that you meet a less stringent emission standard.

(i) We may approve extensions of up to one year. We may review and revise an extension as reasonable under the circumstances.

(j) Add a permanent, legible label, written in block letters in English, to a readily visible part of each container exempted under this section. This label must prominently include at least the following items:

(1) Your corporate name and trademark.

(2) The statement "EXEMPT UNDER 40 CFR 59.663."

**§ 59.664 What are the requirements for importing portable gasoline containers into the United States?**

As specified in this section, we may require you to post a bond if you import into the U.S. containers that are subject to the standards of this subpart. See paragraph (f) of this section for the requirements related to importing containers that have been certified by someone else.

(a) Prior to importing containers into the U.S., we may require you to post a bond to cover any potential enforcement actions under the Clean Air Act if you cannot demonstrate to us that you have assets of an appropriate liquidity readily available in the United States with a value equal to the retail value of the containers that you will import during the calendar year.

(b) We may set the value of the bond up to five dollars per container.

(c) You may meet the bond requirements of this section by obtaining a bond from a third-party surety that is cited in the U.S. Department of Treasury Circular 570, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" (<http://www.fms.treas.gov/c570/c570.html#certified>).

(d) If you forfeit some or all of your bond in an enforcement action, you must post any appropriate bond for continuing importation within 90 days after you forfeit the bond amount.

(e) You will forfeit the proceeds of the bond posted under this section if you need to satisfy any United States administrative final order or judicial judgment against you arising from your conduct in violation of this subpart.

(f) This paragraph (f) applies if you import for resale containers that have been certified by someone else. You and the certificate holder are each

responsible for compliance with the requirements of this subpart and the Clean Air Act. No bond is required under this section if either you or the certificate holder meet the conditions in paragraph (a) of this section. Otherwise, the importer must comply with the bond requirements of this section.

**Definitions and Other Reference Information**

**§ 59.680 What definitions apply to this subpart?**

The following definitions apply to this subpart. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

*Act* means the Clean Air Act, as amended, 42 U.S.C. 7401–7671q.

*Adjustable parameter* means any device, system, or element of design that someone can adjust and that, if adjusted, may affect emissions. You may ask us to exclude a parameter if you show us that it will not be adjusted in use in a way that affects emissions.

*Certification* means the process of obtaining a certificate of conformity for an emission family that complies with the emission standards and requirements in this subpart.

*Certified emission level* means the highest official emission level in an emission family.

*Configuration* means a unique combination of hardware (material, geometry, and size) and calibration within an emission family. Units within a single configuration differ only with respect to normal production variability.

*Container* means portable gasoline container.

*Designated Compliance Officer* means the Manager, Engine Programs Group (6405-J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

*Designated Enforcement Officer* means the Director, Air Enforcement Division (2242A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

*Emission-control system* means any device, system, or element of design that controls or reduces the regulated evaporative emissions from.

*Emission-data unit* means a portable gasoline container that is tested for certification. This includes components tested by EPA.

*Emission-related maintenance* means maintenance that substantially affects emissions or is likely to substantially affect emission deterioration.

*Emission family* has the meaning given in § 59.625.

*Evaporative* means relating to fuel emissions that result from permeation of fuel through the portable gasoline container materials and from ventilation of the container.

*Good engineering judgment* means judgments made consistent with generally accepted scientific and engineering principles and all available relevant information. See § 59.603 for the administrative process we use to evaluate good engineering judgment.

*Hydrocarbon (HC)* means total hydrocarbon (THC).

*Manufacture* means the physical and engineering process of designing and/or constructing a portable gasoline container.

*Manufacturer* means any person who manufactures a portable gasoline container for sale in the United States.

*Nominal capacity* means the expected volumetric working capacity of a container.

*Official emission result* means the measured emission rate for an emission-data unit.

*Portable gasoline container* means any reusable container designed and marketed (or otherwise intended) for use by consumers for receiving, transporting, storing, and dispensing gasoline. For the purpose of this subpart, all portable fuel containers that are red in color are deemed to be portable gasoline containers, regardless of how they are labeled or marketed. Portable fuel containers that are not red in color and are clearly and permanently labeled for diesel fuel or kerosene only and not for use with gasoline are not portable gasoline containers.

*Production period* means the period in which a portable gasoline container will be produced under a certificate of conformity. The maximum production period is five years.

*Revoke* means to terminate the certificate or an exemption for an emission family. If we revoke a certificate or exemption, you must apply for a new certificate or exemption before continuing to introduce the affected containers into commerce. This does not apply to containers you no longer possess.

*Round* has the meaning given in 40 CFR 1065.1001.

*Sealed* means lacking openings that would allow liquid or vapor to escape to the atmosphere under normal operating pressures.

*Suspend* means to temporarily discontinue the certificate or an exemption for an emission family. If we suspend a certificate, you may not introduce into commerce portable gasoline containers from that emission

family unless we reinstate the certificate or approve a new one. If we suspend an exemption, you may not introduce into commerce containers that were previously covered by the exemption unless we reinstate the exemption.

*Test sample* means the collection of portable gasoline containers selected from the population of an emission family for emission testing. This may include testing for certification, production-line testing, or in-use testing.

*Test unit* means a portable gasoline container in a test sample.

*Total hydrocarbon* means the combined mass of organic compounds measured by the specified procedure for measuring total hydrocarbon, expressed as a hydrocarbon with a hydrogen-to-carbon mass ratio of 1.85:1.

*Ultimate purchaser* means, with respect to any portable gasoline container, the first person who in good faith purchases such a container for purposes other than resale.

*Ultraviolet light* means electromagnetic radiation with a wavelength between 300 and 400 nanometers.

*United States* means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

*U.S.-directed production volume* means the amount of portable gasoline containers, subject to the requirements of this subpart, produced by a manufacturer for which the manufacturer has a reasonable assurance that sale was or will be made to ultimate purchasers in the United States.

*Useful life* means the period during which a portable gasoline container is required to comply with all applicable emission standards. See § 59.611.

*Void* means to invalidate a certificate or an exemption *ab initio* (i.e. retroactively). Portable gasoline containers introduced into U.S. commerce under the voided certificate or exemption is a violation of this subpart, whether or not they were introduced before the certificate or exemption was voided.

*We (us, our)* means the Administrator of the Environmental Protection Agency and any authorized representatives.

#### **§ 59.685 What symbols, acronyms, and abbreviations does this subpart use?**

The following symbols, acronyms, and abbreviations apply to this subpart:

CFR Code of Federal Regulations.  
EPA Environmental Protection Agency.  
HC hydrocarbon.

NIST National Institute of Standards and Technology.

THC total hydrocarbon.

U.S.C. United States Code.

#### **§ 59.695 What provisions apply to confidential information?**

(a) Clearly show what you consider confidential by marking, circling, bracketing, stamping, or some other method.

(b) We will store your confidential information as described in 40 CFR part 2. Also, we will disclose it only as specified in 40 CFR part 2. This applies both to any information you send us and to any information we collect from inspections, audits, or other site visits.

(c) If you send us a second copy without the confidential information, we will assume it contains nothing confidential whenever we need to release information from it.

(d) If you send us information without claiming it is confidential, we may make it available to the public without further notice to you, as described in 40 CFR 2.204.

#### **§ 59.697 State actions.**

The provisions in this subpart do not preclude any State or any political subdivision of a State from:

(a) Adopting and enforcing any emission standard or limitation applicable to anyone subject to the provisions of this part; or

(b) Requiring the regulated entity to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of a facility for manufacturing a consumer product.

#### **§ 59.698 May EPA enter my facilities for inspections?**

(a) We may inspect your portable gasoline containers, testing, manufacturing processes, storage facilities (including port facilities for imported containers or other relevant facilities), or records, as authorized by the Act, to enforce the provisions of this subpart. Inspectors will have authorizing credentials and will limit inspections to reasonable times—usually, normal operating hours.

(b) If we come to inspect, we may or may not have a warrant or court order.

(1) If we do not have a warrant or court order, you may deny us entry.

(2) If we have a warrant or court order, you must allow us to enter the facility and carry out the activities it describes.

(c) We may seek a warrant or court order authorizing an inspection described in this section, whether or not we first tried to get your permission to inspect.

(d) We may select any facility to do any of the following:

(1) Inspect and monitor any aspect of portable gasoline container manufacturing, assembly, storage, or other procedures, and any facilities where you do them.

(2) Inspect and monitor any aspect of test procedures or test-related activities, including test container selection, preparation, durability cycles, and maintenance and verification of your test equipment's calibration.

(3) Inspect and copy records or documents related to assembling, storing, selecting, and testing a container.

(4) Inspect and photograph any part or aspect of containers or components use for assembly.

(e) You must give us reasonable help without charge during an inspection authorized by the Act. For example, you may need to help us arrange an inspection with the facility's managers, including clerical support, copying, and translation. You may also need to show us how the facility operates and answer other questions. If we ask in writing to see a particular employee at the inspection, you must ensure that he or she is present (legal counsel may accompany the employee).

(f) If you have facilities in other countries, we expect you to locate them in places where local law does not keep us from inspecting as described in this section. We will not try to inspect if we learn that local law prohibits it, but we may suspend your certificate if we are not allowed to inspect.

**§ 59.699 How do I request a hearing?**

(a) You may request a hearing under certain circumstances, as described elsewhere in this subpart. To do this, you must file a written request with the Designated Compliance Officer, including a description of your objection and any supporting data, within 30 days after we make a decision.

(b) For a hearing you request under the provisions of this subpart, we will approve your request if we find that your request raises a substantial factual issue.

(c) If we agree to hold a hearing, we will use the procedures specified in 40 CFR part 1068, subpart G.

**PART 80—REGULATION OF FUELS AND FUEL ADDITIVES**

3. The authority citation for part 80 is revised to read as follows:

**Authority:** 42 U.S.C. 7414, 7521(1), 7545 and 7601(a).

**Subpart D—[Amended]**

4. Section 80.41 is amended by redesignating paragraph (e) as paragraph (e)(1), redesignating paragraph (f) as paragraph (f)(1), and adding paragraphs (e)(2) and (f)(2) to read as follows:

**§ 80.41 Standards and requirements for compliance.**

\* \* \* \* \*

(e) \* \* \*

(2) Beginning January 1, 2011, or January 1, 2015 for approved small refiners under § 80.1340, the toxic air pollutants emissions performance reduction and benzene content specified in paragraph (e)(1) of this section shall apply only to reformulated gasoline that is not subject to the benzene standard of § 80.1230, pursuant to the provisions of § 80.1235. Beginning January 1, 2007, or January 1, 2008 for approved small refiners under § 80.235, the NO<sub>x</sub> emissions performance reduction specified in paragraph (e)(1) of this section shall no longer apply.

(f) \* \* \*

(2) Beginning January 1, 2011, or January 1, 2015 for approved small refiners under § 80.1340, the toxic air pollutants emissions performance reduction and benzene content specified in paragraph (f)(1) of this section shall apply only to reformulated gasoline that is not subject to the benzene standard of § 80.1230, pursuant to the provisions of § 80.1235. Beginning January 1, 2007, or January 1, 2008 for approved small refiners under § 80.235, the NO<sub>x</sub> emissions performance reduction specified in paragraph (f)(1) of this section shall no longer apply.

\* \* \* \* \*

**Subpart E—[Amended]**

5. Section 80.101 is amended by revising paragraph (c)(2) to read as follows:

**§ 80.101 Standards applicable to refiners and importers.**

\* \* \* \* \*

(c) \* \* \*

(2) Beginning January 1, 1998, each refiner and importer shall be subject to the Complex Model standards for each averaging period. However beginning January 1, 2011, or January 1, 2015 for approved small refiners under § 80.1340, such annual average exhaust toxics standard shall apply only to conventional gasoline that is not subject to the benzene standard of § 80.1230, pursuant to the provisions of § 80.1235. Beginning January 1, 2007, or January 1, 2008 for approved small refiners under § 80.235, the annual average NO<sub>x</sub>

emissions standard section shall no longer apply.

\* \* \* \* \*

**Subpart F—[Amended]**

6. Section 80.128 is amended by revising paragraph (a) to read as follows:

**§ 80.128 Agreed upon procedures for refiners and importers.**

\* \* \* \* \*

(a) Read the refiner's or importer's reports filed with EPA for the previous year as required by §§ 80.75, 80.83(g), 80.105, 80.990 and 80.1354.

\* \* \* \* \*

**Subpart J—[Amended]**

7. Section 80.815 is amended by redesignating paragraph (d)(1) as paragraph (d)(1)(i) and adding paragraph (d)(1)(ii) to read as follows:

**§ 80.815 What are the gasoline toxics performance requirements for refiners and importers?**

\* \* \* \* \*

(d) \* \* \*

(1) \* \* \*

(ii) Beginning January 1, 2011, or January 1, 2015 for approved small refiners under § 80.1340, the gasoline toxics performance requirements of this subpart shall apply only to gasoline that is not subject to the benzene standard of § 80.1230, pursuant to the provisions of § 80.1235.

\* \* \* \* \*

8. Section 80.1035 is amended by adding paragraph (h) to read as follows:

**§ 80.1035 What are the attest engagement requirements for gasoline toxics compliance applicable to refiners and importers?**

\* \* \* \* \*

(h) Beginning January 1, 2011, or January 1, 2015 for approved small refiners per § 80.1340, the requirements of this section shall apply only to gasoline that is not subject to the benzene standard of § 80.1230, pursuant to the provisions of § 80.1235.

9. Subpart L is added to read as follows:

**Subpart L—Gasoline Benzene**

Sec.  
80.1200—80.1219 [Reserved]

**General Information**

80.1220 What are the implementation dates for the gasoline benzene program?

80.1225 Who must register with EPA under the gasoline benzene program?

**Gasoline Benzene Requirements**

80.1230 What are the gasoline benzene requirements for refiners and importers?

80.1235 What gasoline is subject to the benzene requirements of this subpart?

- 80.1236 What requirements apply to California gasoline?
- 80.1238 How is a refinery's or importer's annual average benzene concentration determined?
- 80.1240 How is a refinery's or importer's compliance with the gasoline benzene requirements of this subpart determined?

#### **Averaging, Banking and Trading (ABT) Program**

- 80.1270 Who may generate benzene credits under the ABT program?
- 80.1275 How are early benzene credits generated?
- 80.1280 How are refinery benzene baselines calculated?
- 80.1285 How does a refiner apply for a benzene baseline?
- 80.1290 How are benzene credits generated in 2011 and beyond?
- 80.1295 How are gasoline benzene credits used?

#### **Hardship Provisions**

- 80.1335 Can a refiner seek temporary relief from the requirements of this subpart?
- 80.1336 What if a refiner or importer cannot produce gasoline conforming to the requirements of this subpart?

#### **Small Refiner Provisions**

- 80.1338 What is the definition of a small refiner for the purpose of the gasoline benzene requirements of this subpart?
- 80.1339 Who is not eligible for the provisions for small refiners?
- 80.1340 How does a refiner obtain approval as a small refiner?
- 80.1342 What compliance options are available to small refiners under this subpart?
- 80.1344 What provisions are available to a large refiner that acquires one or more of a small refiner's refineries?

#### **Sampling, Testing and Retention Requirements**

- 80.1347 What are the sampling and testing requirements for refiners and importers?
- 80.1348 What gasoline sample retention requirements apply to refiners and importers?

#### **Recordkeeping and Reporting Requirements**

- 80.1350 What records must be kept?
- 80.1352 What are the pre-compliance reporting requirements for the gasoline benzene program?
- 80.1354 What are the reporting requirements for the gasoline benzene program?

#### **Attest Engagements**

- 80.1375 What are the attest engagement requirements for gasoline benzene compliance?

#### **Violations and Penalties**

- 80.1400 What acts are prohibited under the gasoline benzene program?
- 80.1405 What evidence may be used to determine compliance with the prohibitions and requirements of this subpart and liability for violations of this subpart?
- 80.1410 Who is liable for violations under the gasoline benzene program?

- 80.1415 What penalties apply under the gasoline benzene program?

#### **Foreign Refiners**

- 80.1420 What are the additional requirements under this subpart for gasoline produced at foreign refineries?

### **Subpart L—Gasoline Benzene**

#### **§§ 80.1200–80.1219 [Reserved]**

#### **General Information**

#### **§ 80.1220 What are the implementation dates for the gasoline benzene program?**

(a) *Benzene standard.* (1) Effective with the annual averaging period beginning January 1, 2011, gasoline produced by a refiner at each refinery, or imported into an import facility, must meet the benzene standard specified in § 80.1230, except as otherwise specifically provided for in this subpart.

(2) Approved small refiners under § 80.1340 may defer meeting the benzene standard specified in § 80.1230 until January 1, 2015 as described in § 80.1342.

(b) *Early credit generation.* (1) Beginning June 1, 2007, each refinery which has an approved benzene baseline per § 80.1285 may generate early benzene credits in accordance with the provisions of § 80.1275.

(2) Early benzene credits may be generated through the end of the averaging period ending December 31, 2010.

(3) Early benzene credits may be generated through the end of the averaging period ending December 31, 2014 for approved small refiners under § 80.1340.

(c) *Standard credit generation.* (1) Effective with the annual averaging period beginning January 1, 2011, a refiner for any of its refineries or an importer for its imported gasoline, may generate benzene credits in accordance with the provisions of § 80.1290.

(2) Effective with the annual averaging period beginning January 1, 2015, an approved small refiner under § 80.1340, for any of its refineries, may generate benzene credits in accordance with the provisions of § 80.1290.

#### **§ 80.1225 Who must register with EPA under the gasoline benzene program?**

(a) Refiners and importers that are registered by EPA under § 80.76, § 80.103, § 80.190, or § 80.810 are deemed to be registered for purposes of this subpart.

(b) Refiners and importers subject to the requirements in § 80.1230 that are not registered by EPA under § 80.76, § 80.103, § 80.190 or § 80.810 shall provide to EPA the information required in § 80.76 by September 30, 2010, or not

later than three months in advance of the first date that such person produces or imports gasoline, whichever is later.

(c) Refiners that plan to generate early credits under § 80.1275 and that are not registered by EPA under § 80.76, § 80.103, § 80.190, or § 80.810 must provide to EPA the information required in § 80.76 not later than 60 days prior to the end of the first year of credit generation.

#### **Gasoline Benzene Requirements**

#### **§ 80.1230 What are the gasoline benzene requirements for refiners and importers?**

(a)(1) Except as specified in paragraph (b) of this section, a refinery's or importer's average gasoline benzene concentration in any averaging period shall not exceed 0.62 percent by volume using conventional rounding methodology.

(2) Compliance with the standard specified in paragraph (a)(1) of this section, or creation of a deficit in accordance with paragraph (b) of this section, is determined in accordance with § 80.1240.

(3) The averaging period for achieving compliance with the requirement of paragraph (a)(1) of this section is January 1 through December 31 of each calendar year, beginning January 1, 2011, or beginning January 1, 2015 for approved small refiners under § 80.1340.

(4) Refinery grouping per § 80.101(h) does not apply to compliance with the gasoline benzene requirement specified in this paragraph (a).

(5) Gasoline produced at foreign refineries that is subject to the gasoline benzene requirements per § 80.1235 shall be included in the importer's compliance determination, except as provided in § 80.1420.

(b) *Deficit carry-forward.* (1) A refinery or importer creates a benzene deficit for a given averaging period when its compliance benzene value, per § 80.1240, is greater than the benzene standard specified in paragraph (a) of this section.

(2) A refinery or importer may carry the benzene deficit forward to the calendar year following the year the benzene deficit is created but only if no deficit had been previously carried forward a deficit to the year the deficit is created. If a refinery or importer carries forward, the following provisions apply in the second year:

(i) The refinery or importer must achieve compliance with the benzene standard specified in paragraph (a) of this section.

(ii) The refinery or importer must achieve further reductions in its

gasoline benzene concentrations sufficient to offset the benzene deficit of the previous year.

(iii) Benzene credits may be used, per § 80.1295, to meet the requirements of paragraphs (b)(2)(i) and (ii) of this section.

(3) In the case of an approved hardship under § 80.1335 or § 80.1336, EPA may allow a briefly extended period of deficit carry-forward.

(c) *Oxygenate blenders, butane blenders and refiners that produce gasoline from transmix.* (1)(i) Refiners and oxygenate blenders that only blend butane or oxygenate into gasoline downstream of the refinery that produced the gasoline or the import facility where the gasoline was imported, are not subject to the requirements of § 80.1230 for such gasoline.

(ii) Refiners that produce gasoline by separating gasoline from transmix are not subject to the requirements of § 80.1230 for this gasoline.

(2) Any refiner under paragraph (c)(1) of this section that adds any blendstock or feedstock other than, or in addition to, oxygenate and/or butane into gasoline downstream of the refinery that produced the gasoline or the import facility where the gasoline was imported, or into transmix, or into gasoline produced from transmix, is subject to the requirements of § 80.1230 for this blendstock or feedstock.

**§ 80.1235 What gasoline is subject to the benzene requirements of this subpart?**

For the purposes of determining compliance with the requirements of § 80.1230, all reformulated gasoline, RBOB, and conventional gasoline or gasoline blending stock per § 80.101(d) are collectively "gasoline." Unless otherwise specified, all of a refinery's or importer's gasoline is subject to the standards and requirements of § 80.1230, with the following exceptions:

(a) Gasoline that is used to fuel aircraft, racing vehicles or racing boats that are used only in sanctioned racing events, provided that:

(1) Product transfer documents associated with such gasoline, and any pump stand from which such gasoline is dispensed, identify the gasoline either as gasoline that is restricted for use in aircraft, or as gasoline that is restricted for use in racing motor vehicles or racing boats that are used only in sanctioned events;

(2) The gasoline is completely segregated from all other gasoline throughout production, distribution and sale to the ultimate consumer; and

(3) The gasoline is not made available for use as motor vehicle gasoline, or dispensed for use in motor vehicles, except for motor vehicles used only in sanctioned racing events.

(b) California gasoline, as defined in § 80.1236.

(c) Gasoline that is exported for sale outside the U.S.

(d) Gasoline used for research, development or testing purposes if it is exempted for these purposes under the reformulated gasoline and anti-dumping programs, as applicable.

(e) Gasoline produced pursuant to § 80.1230(c)(1).

**§ 80.1236 What requirements apply to California gasoline?**

(a) *Definition.* For purposes of this subpart, California gasoline means any gasoline designated by the refiner or importer as for use only in California and that is actually used in California.

(b) *California gasoline exemption.* California gasoline that complies with all the requirements of this section is exempt from the requirements in § 80.1230.

(c) *Requirements for California gasoline.* The following requirements apply to California gasoline:

(1) Each batch of California gasoline must be designated as such by its refiner or importer.

(2) Designated California gasoline must be kept segregated from gasoline that is not California gasoline at all points in the distribution system.

(3) Designated California gasoline must ultimately be used in the State of California and not used elsewhere in the United States.

(4) In the case of California gasoline produced outside the State of California, the transferors and transferees must meet the product transfer document requirements under § 80.81(g).

(5) Gasoline that is ultimately used in any part of the United States outside of the State of California must comply with the requirements specified in § 80.1230, regardless of any designation as California gasoline.

**§ 80.1238 How is a refinery's or importer's annual average benzene concentration determined?**

(a) The annual average benzene concentration of gasoline produced at a refinery or imported by an importer for the applicable averaging period is calculated according to the following equation:

$$B_{\text{avg}} = \frac{\sum_{i=1}^n (V_i \times B_i)}{\sum_{i=1}^n V_i}$$

Where:

$B_{\text{avg}}$  = Annual average benzene concentration (volume percent benzene).

$i$  = Individual batch of gasoline produced at the refinery or imported.

$n$  = Total number of batches of gasoline produced at the refinery or imported during the applicable annual averaging period.

$V_i$  = Volume of gasoline in batch  $i$  (gallons).

$B_i$  = Benzene concentration of batch  $i$  (volume percent benzene), per § 80.46(e).

(b) All input batch benzene concentration values used in paragraph (a) of this section shall be expressed to two decimal places.

(c) Annual average benzene concentration values calculated under paragraph (a) of this section shall be expressed to two decimal places using conventional rounding methodology.

(d) A refiner or importer may include the volume of oxygenate added downstream from the refinery or import facility in the calculation specified in paragraph (a) of this section, provided the following requirements are met:

(1) For oxygenate added to conventional gasoline, the refiner or importer must comply with the requirements of § 80.101(d)(4)(ii) and (g)(3).

(2) For oxygenate added to RBOB, the refiner or importer must comply with the requirements of § 80.69(a).

(e) Refiners and importers must exclude from the calculation specified in paragraph (a) of this section all of the following:

(1) Gasoline that was not produced at the refinery or imported by the importer.

(2) Except as provided in paragraph (c) of this section, any blendstocks or unfinished gasoline transferred to others.

(3) Gasoline that has been included in the compliance calculations for another refinery or importer.

(4) Gasoline exempted from the standards under § 80.1235.

**§ 80.1240 How is a refinery's or importer's compliance with the gasoline benzene requirements of this subpart determined?**

(a)(1) The compliance benzene value for a refinery or importer is:

$$CBV_y = V_y \times \left( \frac{B_{avg}}{100} \right) + D_{y-1} - BC - RC$$

Where:

$CBV_y$  = Compliance benzene value (gallons benzene) for year  $y$ .

$V_y$  = Gasoline volume produced or imported in year  $y$  (gallons).

$B_{avg}$  = Annual average benzene concentration (volume percent benzene), per § 80.1238.

$D_{y-1}$  = Benzene deficit from the previous reporting period, per § 80.1230(b) (gallons benzene).

$BC$  = Banked benzene credits used to show compliance (gallons benzene).

$RC$  = Benzene credits received by the refinery or importer, per § 80.1295(c), used to show compliance (gallons benzene).

(2) If  $CBV_y \leq V_y \times (0.62)/100$ , then compliance is achieved for calendar year  $y$ .

(b)(1) A deficit is created when  $CBV_y > V_y \times (0.62)/100$ .

(2) The deficit value to be included in the following year's compliance calculation per paragraph (a) of this section, is calculated as follows:

$$D_{y-1} = V_y \times \left( \frac{0.62}{100} \right) - CBV_y$$

#### Averaging, Banking and Trading (ABT) Program

##### § 80.1270 Who may generate benzene credits under the ABT program?

(a) *Early credits.* (1) Early credits may be generated under § 80.1275 by a refinery for a refinery with an approved benzene baseline under § 80.1285.

(2) Early credits may be generated under § 80.1275 only by refiners that produce gasoline by processing crude oil through refinery processing units.

(3)(i) A refinery that was shut down during the entire 2004–2005 benzene baseline period is not eligible to generate early credits under § 80.1275.

(ii) A refinery not in full production, excluding normal refinery downtime, or not showing consistent or regular gasoline production activity during 2004–2005 may be eligible to generate early benzene credits under § 80.1275 upon petition to and approval by EPA, under § 80.1285.

(b) *Standard Credits.* (1) Standard credits may be generated under § 80.1290 by refineries and importers for gasoline produced or imported for use in the U.S., excluding gasoline exempt from the benzene standard under the provisions of § 80.1235.

(2) Oxygenate blenders, butane blenders, and transmix producers are

not eligible to generate standard credits under § 80.1290.

##### § 80.1275 How are early benzene credits generated?

(a) Early benzene credits may be generated only if a refinery's annual average gasoline benzene concentration is at least 10% lower than the refinery's approved baseline benzene concentration per § 80.1280.

(b) [Reserved]

(c) The early credit annual averaging periods are as follows:

(1) For 2007, the seven-month period from June 1, 2007, through December 31, 2007, inclusive.

(2) For 2008, 2009 and 2010, the 12-month calendar year.

(3) For 2011, 2012, 2013, and 2014, which apply only to approved small refiners per § 80.1340, the 12-month calendar year.

(d) The number of early benzene credits shall be calculated annually for each applicable averaging period as follows:

(1) Proceed to paragraph (d)(2) of this section under the following condition.

$$B_{avg} \leq B_{Base} \times 0.90$$

Where:

$B_{avg}$  = Annual average benzene concentration (volume percent benzene) of gasoline produced at the refinery, per § 80.1238.

$B_{Base}$  = Baseline benzene concentration (volume percent benzene) of the refinery, per § 80.1280(b).

(2) Calculate the number of early credits generated by the refinery for the averaging period as follows:

$$EC_y = \left[ \frac{B_{Base} - B_{avg}}{100} \right] \times V_e$$

Where:

$EC_y$  = Early credits generated in year  $y$  (gallons benzene).

$B_{avg}$  = Annual average benzene concentration (volume percent benzene) of gasoline produced at the refinery, per § 80.1238 that satisfies the condition of paragraph (d)(1) of this section.

$V_e$  = Total volume of gasoline (gallons) produced during the annual averaging period at the refinery.

(e) All input benzene concentration values used in paragraph (d) of this section shall be expressed to two decimal places.

(f) Early benzene credits calculated under paragraph (d) of this section shall be expressed to the nearest gallon using conventional rounding methodology.

(g)(1) Early benzene credits shall be calculated separately for each refinery.

(2) Refiners shall not move gasoline or gasoline blending stocks from one refinery to another for the purpose of generating early credits.

(h) An importer may not generate early credits.

(i) A foreign refiner with an approved baseline may generate early credits subject to the provisions of § 80.1420.

##### § 80.1280 How are refinery benzene baselines calculated?

(a) A refinery's benzene baseline is based on the refinery's 2004–2005 average gasoline benzene concentration, calculated according to the following equation:

$$B_{Base} = \frac{\sum_{i=1}^n (V_i \times B_i)}{\sum_{i=1}^n V_i}$$

Where:

$B_{Base}$  = Benzene baseline concentration (volume percent benzene).

$i$  = Individual batch of gasoline produced at the refinery from January 1, 2004 through December 31, 2005.

$n$  = Total number of batches of gasoline produced at the refinery from January 1, 2004 through December 31, 2005 (or the total number of batches of gasoline pursuant to § 80.1285(d)).

$V_i$  = Volume of gasoline in batch  $i$  (gallons).

$B_i$  = Benzene content of batch  $i$  (volume percent benzene).

(b) All input batch benzene concentration values used in paragraph (a) of this section shall be expressed to two decimal places.

(c) Baseline benzene concentration values calculated under paragraph (a) of this section shall be expressed to two decimal places using conventional rounding methodology.

(d) Any refiner that, under § 80.69 or § 80.101(d)(4), included oxygenate blended downstream in compliance calculations for RFG or conventional gasoline for calendar years 2004 or 2005 for a refinery must include the volume and benzene concentration of this oxygenate in the baseline calculations for gasoline benzene content for that refinery under paragraph (a) of this section.

##### § 80.1285 How does a refiner apply for a benzene baseline?

(a) A refiner must submit an application to EPA which includes the information specified in paragraph (c) of this section at least 60 days before the refinery plans to begin generating early credits.

(b) The benzene baseline application shall be sent to: U.S. EPA, Attn: Early Gasoline Benzene Credits (6406J), 1200 Pennsylvania Ave., NW., Washington, DC 20460. For commercial delivery: U.S. EPA Attn: Early Gasoline Benzene Credits (6406J), 501 3rd Street, NW., Washington, DC 20001.

(c) A benzene baseline application must be submitted for each refinery that plans to generate early credits under § 80.1275 and must include the following information:

(1) A listing of the names and addresses of all refineries owned by the company.

(2) The benzene baseline for gasoline produced in 2004–2005 at the refinery, calculated in accordance with § 80.1280(b).

(3) Copies of the annual reports required under § 80.75 for RFG and § 80.105 for conventional gasoline.

(4) A letter signed by the president, chief operating officer, or chief executive officer, of the company, or his/her designee, stating that the information contained in the benzene baseline determination is true to the best of his/her knowledge.

(5) Name, address, phone number, facsimile number and e-mail address of a corporate contact person.

(d) A refiner, for a refinery that qualifies for generating early credits under § 80.1270(a)(3)(ii) may submit to EPA a benzene baseline application per the requirements of this section. The refiner must also submit information regarding the nature and cause of the inconsistent production, how it affects the baseline and benzene concentration, and whether an alternative calculation to the calculation specified in § 80.1280 produces a more representative benzene baseline value. EPA, upon consideration of the submitted information, may approve a benzene baseline for such a refinery.

(e) Within 60 days of receipt of an application under this section, except for applications submitted in accordance with paragraph (d) of this section, EPA will notify the refiner of approval of the refinery's baseline or any deficiencies in the application.

(f) If at any time the baseline submitted in accordance with the requirements of this section is determined to be incorrect, EPA will notify the refiner of the corrected baseline.

#### § 80.1290 How are benzene credits generated in 2011 and beyond?

(a) Gasoline benzene standard credits may be generated by the following parties during any applicable averaging

period specified in paragraph (b) of this section:

(1) A refiner, at any of its refineries that produce gasoline for use in the U.S. (excluding gasoline under § 80.1235 that is exempt from the requirements of this subpart). Credits are generated separately by each refinery;

(2) Importers, for all of their imported gasoline (excluding gasoline under § 80.1235 that is exempt from the requirements of this subpart);

(b) The standard credit averaging periods are the calendar years beginning with 2011, or beginning with 2015 for approved small refiners.

(c) [Reserved]

(d)(1) The number of standard credits generated by a refinery or importer shall be calculated annually according to the following equation:

$$SC_y = \left[ \frac{0.62 - B_{avg}}{100} \right] \times V_y$$

Where:

$SC_y$  = Standard credits generated in year y (gallons benzene).

$B_{avg}$  = Annual average benzene concentration for year y (volume percent benzene), per § 80.1238.

$V_y$  = Total volume of gasoline produced or imported in year y (gallons).

(2) No credits shall be generated unless the value  $SC_y$  is positive.

(e) All input benzene concentration values used in paragraph (d) of this section shall be expressed to two decimal places.

(f) Standard benzene credits calculated under paragraph (d) of this section shall be expressed to the nearest gallon using conventional rounding methodology.

(g) Foreign refiners may not generate credits under this section.

#### § 80.1295 How are gasoline benzene credits used?

(a) *Credit use.* (1) Gasoline benzene credits generated under §§ 80.1275 and 80.1290 may be used to comply with the gasoline benzene content requirement of § 80.1230 provided that:

(i) The gasoline benzene credits were generated and reported according to the requirements of this subpart; and

(ii) The conditions of this section § 80.1295 are met.

(2) Gasoline benzene credits generated under §§ 80.1275 and 80.1290 may be used by a refiner or importer to comply with the gasoline benzene content standard of § 80.1230, may be banked by a refiner or importer for future use or transfer, may be transferred to another refinery or importer within a company (intracompany), or may be transferred to

another refinery or importer outside of the company.

(b) *Credit banking.* Gasoline benzene credits generated by a refinery or importer may be banked for use in a later compliance period, or may be transferred to another refiner, refinery, or importer for use as provided in paragraph (c) of this section.

(c) *Credit transfers.* (1) Gasoline benzene credits obtained from another refinery or importer may be used to comply with the gasoline benzene content requirement of § 80.1230 provided the following conditions are met:

(i) The credits are generated and reported according to the requirements of this subpart, and the transferred credit has not expired, per paragraph (d) of this section.

(ii) Any credit transfer takes place no later than the last day of February following the calendar year averaging period when the credits are used.

(iii) The credit has not been transferred more than twice. The first transfer by the refinery or importer that generated the credit may only be made to a refiner or importer that intends to use the credit; if the transferee cannot use the credit, it may make the second, and final, transfer only to a refinery or importer that intends to use or terminate the credit. In no case may a credit be transferred more than twice before being used or terminated.

(iv) The credit transferor has applied any gasoline benzene credits necessary to meet its own annual compliance requirements (and any deficit carry-forward, if applicable) before transferring any gasoline benzene credits to any other refiner or importer.

(v) The credit transferor would not create a deficit as a result of a credit transfer.

(vi) The transferor supplies to the transferee records indicating the year the gasoline benzene credits were generated, the identity of the refiner (and refinery) or importer that generated the gasoline benzene credits and the identity of the transferring entity if not the same entity that generated the gasoline benzene credits.

(2) In the case of gasoline benzene credits that have been calculated or created improperly, or have otherwise been determined to be invalid, the following provisions apply:

(i) Invalid gasoline benzene credits cannot be used to achieve compliance with the gasoline benzene content requirement of § 80.1230 regardless of the transferee's good faith belief that the gasoline benzene credits were valid.

(ii) The refiner or importer that used the gasoline benzene credits and any



transferor of the gasoline benzene credits must adjust their credit records, reports, and compliance calculations as necessary to reflect the proper gasoline benzene credits.

(iii) Any properly created gasoline benzene credits existing in the transferor's credit balance following the corrections and adjustments specified in paragraph (c)(2)(ii) of this section and after the transferor applies gasoline benzene credits as needed to meet its own compliance requirements at the end of the compliance period, must first be applied to correct the invalid transfers to the transferee, before the transferor uses, trades or banks the gasoline benzene credits.

(d) *Credit life.* (1) Early credits, per § 80.1275, may be used for compliance purposes under § 80.1240 for any calendar year averaging period prior to the 2014 averaging period.

(2) Standard credits, per § 80.1290, shall have a credit life of 5 calendar year averaging periods after the year in which they were generated. Example: Standard credits generated during 2014 may be used to achieve compliance under § 80.1240 for any calendar year averaging period prior to the 2020 averaging period.

(3) Notwithstanding paragraphs (d)(1) and (d)(2) of this section, credits traded to or used by approved small refiners per § 80.1340, have an additional credit life of two calendar year averaging periods.

(e) *General limitations on credit use.* A refiner or importer possessing gasoline benzene credits must use all gasoline benzene credits in its possession prior to applying the credit deficit provisions of § 80.1230(b).

### Hardship Provisions

#### § 80.1335 Can a refiner seek temporary relief from the requirements of this subpart?

(a) EPA may permit a refinery to have an extended period of deficit carry-forward, for the shortest period practicable, per § 80.1230(b), if the refiner demonstrates that:

(1) Unusual circumstances exist that impose extreme hardship and significantly affect the ability to comply by the applicable date; and

(2) It has made best efforts to comply with the requirements of this subpart, including making all possible efforts to obtain sufficient credits to meet the standard.

(b) Applications must be submitted to EPA by September 1, 2009.

(1) Approval of a hardship under this section shall be in the form an extended period of deficit carry-forward, per § 80.1230(b), for such period of time as

EPA determines is appropriate, but shall not extend beyond December 31, 2014.

(2) EPA reserves the right to deny applications for appropriate reasons, including unacceptable environmental impact.

(c)(1) Applications must include a plan demonstrating how the refiner will comply with the requirements of this subpart as expeditiously as possible. The plan shall include a showing that contracts are or will be in place for engineering and construction of benzene reduction technology, a plan for applying for and obtaining any permits necessary for construction, a description of plans to obtain necessary capital, and a detailed estimate of when the requirements of this subpart will be met.

(2) Applications must include a detailed description of the refinery configuration and operations including, at minimum, the following information:

(i) The refinery's total reformer unit throughput capacity;

(ii) The refinery's total crude capacity;

(iii) Total crude capacity of any other refineries owned by the same entity;

(iv) Total volume of gasoline production at the refinery;

(v) Total volume of other refinery products; and

(vi) Geographic location(s) where the refinery's gasoline will be sold.

(3) Applications must include, at a minimum, the following information:

(i) Detailed descriptions of efforts to obtain capital for refinery investments;

(ii) Detailed descriptions of efforts to obtain credits;

(iii) Bond rating of entity that owns the refinery; and

(iv) Estimated capital investment needed to comply with the requirements of this subpart

(4) Applicants must also provide any other relevant information requested by EPA.

(d) EPA may impose any reasonable conditions on waivers granted under this section, including the condition that if more credits are available than was anticipated at the time of the hardship approval, the extended period of deficit carry-forward may be shortened.

#### § 80.1336 What if a refiner or importer cannot produce gasoline conforming to the requirements of this subpart?

In extreme and unusual circumstances (e.g., natural disaster or Act of God) which are clearly outside the control of the refiner or importer and which could not have been avoided by the exercise of prudence, diligence, and due care, EPA may permit a refinery or importer to extend the deadline for meeting the deficit carry-forward

requirements under § 80.1230(b) for a brief period (e.g., where appropriate, EPA may allow one or more additional weeks after the last day of February to purchase credits), provided the refinery or importer meets all the criteria, requirements and conditions contained in § 80.73(a) through (e).

### Small Refiner Provisions

#### § 80.1338 What is the definition of a small refiner for the purpose of the gasoline benzene requirements of this subpart?

(a) A small refiner is defined as any person, as defined by 42 U.S.C. 7602(e), that—

(1) Produced gasoline at a refinery by processing crude oil through refinery processing units from January 1, 2005, through December 31, 2005; and

(2) Employed an average of no more than 1,500 people, based on the average number of employees for all pay periods from January 1, 2005 through December 31, 2005; and

(3) Had a corporate average crude oil capacity less than or equal to 155,000 barrels per calendar day (bpcd) for 2005; or

(4) Has been approved by EPA as a small refiner under § 80.1340.

(b) For the purpose of determining the number of employees and the crude oil capacity under paragraph (a) of this section, the following determinations shall be observed:

(1) The refiner shall include the employees and crude oil capacity of any subsidiary companies, any parent company and subsidiaries of the parent company in which the parent has a controlling interest, and any joint venture partners.

(2) For any refiner owned by a governmental entity, the number of employees and total crude oil capacity as specified in paragraph (a) of this section shall include all employees and crude oil production of the government to which the governmental entity is a part.

(3) Any refiner owned and controlled by an Alaska Regional or Village Corporation organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601) is not considered an affiliate of such entity, or with other concerns owned by such entity, solely because of their common ownership.

(c) Notwithstanding the provisions of paragraph (a) of this section, a refiner that reactivates a refinery, which it previously operated, and that was shut down or non-operational for the entire period between January 1, 2005, and December 31, 2005, may apply for small refiner status in accordance with the provisions of § 80.1340.

**§ 80.1339 Who is not eligible for the provisions for small refiners?**

(a) The following are not eligible for the hardship provisions for small refiners:

(1) Refiners with refineries built after December 31, 2005;

(2) Refiners that exceed the employee or crude oil capacity criteria under § 80.1338 but that meet these criteria after December 31, 2005, regardless of whether the reduction in employees or crude capacity is due to operational changes at the refinery or a company sale or reorganization.

(3) Importers.

(4) Refiners that produce gasoline other than by processing crude oil through refinery processing units.

(b)(1)(i) Refiners that qualify as small under § 80.1338 and subsequently cease production of gasoline from processing crude oil through refinery processing units, employ more than 1,500 people or exceed the 155,000 bpcd crude oil capacity limit after December 31, 2005, as a result of merger with or acquisition of or by another entity, are disqualified as small refiners, except this shall not apply in the case of a merger between two previously approved small refiners. If disqualification occurs, the refiner shall notify EPA in writing no later than 20 days following this disqualifying event.

(ii) Except as provided under paragraph (b)(1)(iii) of this section, any refiner whose status changes under this paragraph (b) shall meet the applicable standards of § 80.1230 within a period of up to 30 months of the disqualifying event for all of its refineries. However, such period shall not extend beyond December 31, 2014.

(iii) A refiner may apply to EPA for an additional six months to comply with the standards of § 80.1230 if more than 30 months will be required for the necessary engineering, permitting, construction, and start-up work to be completed. Such applications must include detailed technical information supporting the need for additional time. EPA will base its decision to approve additional time on the information provided by the refiner and on other relevant information. In no case will EPA extend the compliance date beyond December 31, 2014.

(iv) During the period of time of up to 30 months provided under paragraph (b)(1)(ii) of this section, and any extension provided under paragraph (b)(1)(iii) of this section, the refiner may not generate gasoline benzene credits under § 80.1275 or § 80.1290.

(2) An approved small refiner per § 80.1340 may elect to meet the requirements of § 80.1230 applicable to

non-small refiners by notifying EPA in writing no later than November 15 prior to the year that the change will occur. Any refiner whose status changes under this paragraph (b)(2) shall meet the requirements for non-small refiners under § 80.1230 beginning with the first averaging period subsequent to the status change.

**§ 80.1340 How does a refiner obtain approval as a small refiner?**

(a) Applications for small refiner status must be submitted to EPA by December 31, 2007.

(b) Applications for small refiner status must be sent to: U.S. EPA, Attn: MSAT2 Benzene (6406J), 1200 Pennsylvania Ave., NW., Washington, DC 20460. For commercial delivery: U.S. EPA Attn: MSAT2 Benzene (6406J), 501 3rd Street, NW., Washington, DC 20001.

(c) The small refiner status application must contain the following information for the company seeking small refiner status, and for all subsidiary companies, all parent companies, all subsidiaries of the parent companies, and all joint venture partners:

(1) *Employees.* (i) A listing of the names and addresses of each location where any employee worked during the 12 months preceding January 1, 2006;

(ii) The average number of employees at each location based upon the number of employees for each pay period for the 12 months preceding January 1, 2006; and

(iii) The type of business activities carried out at each location.

(iv) In the case of a refiner that reactivates a refinery that it previously owned and operated and that was shut down or non-operational between January 1, 2005, and January 1, 2006, include the following:

(A) A listing of the name and address of each location where any employee of the refiner worked since the refiner acquired or reactivated the refinery;

(B) The average number of employees at any such reactivated refinery during each calendar year since the refiner reactivated the refinery; and

(C) The type of business activities carried out at each location.

(vi) For joint ventures, the total number of employees includes the combined employee count of all corporate entities in the venture.

(vii) For government-owned refiners, the total employee count includes all government employees.

(2) *Crude oil capacity.* (i) The total corporate crude oil capacity of each refinery as reported to the Energy Information Administration (EIA) of the

U.S. Department of Energy (DOE), for the period January 1, 2005, through December 31, 2005.

(ii) The information submitted to EIA is presumed to be correct. In cases where a company disagrees with this information, the company may petition EPA with appropriate data to correct the record when the company submits its application for small refiner status.

(3) The type of business activity carried out at each location.

(4) For each refinery, an indication of the small refiner option(s) intended to be utilized at the refinery.

(5) A letter signed by the president, chief operating or chief executive officer of the company, or his/her designee, stating that the information contained in the application is true to the best of his/her knowledge, and that the company owned the refinery as of January 1, 2006.

(6) Name, address, phone number, facsimile number, and E-mail address of a corporate contact person.

(d) Approval of a small refiner status application will be based on all information submitted under paragraph (c) of this section and any other relevant information.

(e) EPA will notify a refiner of approval or disapproval of small refiner status by letter.

(1) If approved, all refineries of the refiner may defer meeting the standard specified in § 80.1230 until the annual averaging period beginning January 1, 2015.

(2) If disapproved, all refineries of the refiner must meet the standard specified in § 80.1230 beginning with the annual averaging period beginning January 1, 2011.

(f) If EPA finds that a refiner provided false or inaccurate information on its application for small refiner status, upon notice from EPA, the refiner's small refiner status will be void ab initio.

(g) Prior to January 1, 2014, and upon notification to EPA, an approved small refiner per this section may withdraw its status as a small refiner. Effective on January 1 of the year following such notification, the small refiner will become subject to the standards at § 80.1230.

**§ 80.1342 What compliance options are available to small refiners under this subpart?**

(a) A refiner that has been approved as a small refiner under § 80.1340 may—

(1) Defer meeting the standard specified in section § 80.1230 until the annual averaging period January 1, 2015; or

(2) Meet the standard specified in § 80.1230 beginning January 1 of any of

the following annual averaging periods: 2007, 2008, 2009, 2010, 2011, 2012, 2013, and 2014.

(b) The provisions of paragraph (a) of this section shall apply separately for each of an approved small refiner's refineries.

**§ 80.1344 What provisions are available to a large refiner that acquires one or more of a small refiner's refineries?**

(a) In the case of a refiner without approved small refiner status that acquires a refinery from an approved small refiner per § 80.1340, the small refiner provisions of the gasoline benzene program of this subpart may continue to apply to the acquired refinery for a period of up to 30 months from the date of acquisition of the refinery. In no case shall this period extend beyond December 31, 2014.

(b) A refiner may apply to EPA for up to an additional six months to comply with the standards of § 80.1230 for the acquired refinery if more than 30 months would be required for the necessary engineering, permitting, construction, and start-up work to be completed. Such applications must include detailed technical information supporting the need for additional time. EPA will base a decision to approve additional time on information provided by the refiner and on other relevant information. In no case shall this period extend beyond December 31, 2014.

(c) A refiner that acquires a refinery from an approved small refiner per § 80.1340 shall notify EPA in writing no later than 20 days following the acquisition.

**Sampling, Testing and Retention Requirements**

**§ 80.1347 What are the sampling and testing requirements for refiners and importers?**

(a) *Sample and test each batch of gasoline.* Refiners and importers shall collect a representative sample from each batch of gasoline produced or imported. Each sample shall be tested in accordance with the methodology specified at § 80.46(e) to determine its benzene concentration for compliance with the requirements of this subpart.

(b) *Batch numbering.* The batch numbering convention of § 80.365(b)(2) shall apply to batches of conventional gasoline.

(c) The requirements of this section apply to any refiner or importer subject to the requirements of this subpart, including those generating early credits per § 80.1275, all non-small refiners and importers beginning January 1, 2011, and small refiners beginning January 1, 2015.

**§ 80.1348 What gasoline sample retention requirements apply to refiners and importers?**

The gasoline sample retention requirements specified in subpart H of this part for the gasoline sulfur provisions apply for the purpose of complying with the requirements of this subpart, except that in addition to including the sulfur test result as provided by § 80.335(a)(4)(ii), the refiner, importer, or independent laboratory shall also include with the retained sample the test result for benzene as conducted pursuant to § 80.46(e).

**Recordkeeping and Reporting Requirements**

**§ 80.1350 What records must be kept?**

(a) *General requirements.* The recordkeeping requirements specified in § 80.74 and § 80.104, as applicable, apply for the purpose of complying with the requirements of this subpart, however, duplicate records are not required.

(b) *Additional records that refiners and importers shall keep.* Beginning January 1, 2007, any refiner for each of its refineries, and any importer for the gasoline it imports, shall keep records that include the following information (including any supporting calculations as applicable):

(1) Its compliance benzene value per § 80.1240, and the calculations used to obtain that value.

(2) Its benzene baseline value, per § 80.1280, if the refinery or importer submitted a benzene baseline application to EPA per § 80.1285;

(3) The number of early benzene credits generated under § 80.1275, separately by year of generation;

(4) The number of early benzene credits obtained, separately by generating refinery and year of generation;

(5) The number of valid credits in possession of the refinery or importer at the beginning of each averaging period, separately by generating facility and year of generation;

(6) The number of standard credits generated by the refinery or importer under § 80.1290, separately by transferor (if applicable), and by year of generation;

(7) The number of credits used, separately by generating facility and year of generation;

(8) If any credits were obtained from, or transferred to, other parties, for each other party, its name, its EPA refinery or importer registration number, and the number of credits obtained from, or transferred to, the other party;

(9) The number of credits that expired at the end of the averaging period, separately by generating facility and year of generation;

(10) The number of credits that will be carried over into the subsequent averaging period, separately by generating facility and year of generation;

(11) Contracts or other commercial documents that establish each transfer of credits from the transferor to the transferee; and

(12) A copy of all reports submitted to EPA under §§ 80.1352 and 80.1354, however, duplicate records are not required.

(c) *Length of time records shall be kept.* The records required by this section shall be kept for five years from the end of the annual averaging period during which they were created, or seven years for records pertaining to credits traded to a small refiner in accordance with § 80.1295(d)(3), except where longer record retention is required elsewhere in this subpart.

(d) *Make records available to EPA.* On request by EPA, the records specified in this section shall be provided to the Administrator. For records that are electronically generated or maintained, the equipment and software necessary to read the records shall be made available, or upon approval by EPA, electronic records shall be converted to paper documents which shall be provided to the Administrator.

**§ 80.1352 What are the pre-compliance reporting requirements for the gasoline benzene program?**

(a) Except as provided in paragraph (c) of this section, a refiner for each of its refineries shall submit the following information to EPA beginning June 1, 2008, and annually thereafter through June 1, 2011, or through June 1, 2015, for small refiners:

(1) Changes to the information submitted in the company's registration;

(2) Changes to the information submitted for any refinery or import facility registration;

(3) Gasoline production. (i) An estimate of the average daily volume (in gallons) of gasoline produced at each refinery. This estimate shall include RFG, RBOB, conventional gasoline and conventional gasoline blendstock that becomes finished gasoline solely upon the addition of oxygenate but shall exclude gasoline exempted pursuant to § 80.1235;

(ii) These volume estimates must be provided for the periods of June 1, 2007, through December 31, 2007, and calendar years 2008, 2009 and 2010.

(4) Benzene concentration. An estimate of the average gasoline benzene

concentration corresponding to the time periods specified in paragraph (a)(3) of this section.

(5) **ABT Participation.** If the refinery is expecting to participate in the credit trading program under § 80.1275 and/or § 80.1290, the actual or estimated, as applicable, numbers of early credits and standard credits expected to be generated and/or used each year through 2015.

(6) Information on any project schedule by quarter of known or projected completion date by the stage of the project, for example, following the five project phases described in EPA's June 2002 Highway Diesel Progress Review report (EPA420-R-02-016, <http://www.epa.gov/otaq/regs/hd2007/420r02016.pdf>): Strategic planning, Planning and front-end engineering, Detailed engineering and permitting, Procurement and Construction, and Commissioning and startup;

(7) Basic information regarding the selected technology pathway for compliance (e.g., precursor re-routing or other technologies, revamp vs. grassroots, etc.);

(8) Whether capital commitments have been made or are projected to be made.

(b) The pre-compliance reports due in 2008 and succeeding years must provide an update of the progress in each of these areas and actual values where available.

(c) The pre-compliance reporting requirements of this section do not apply to refineries exempted under the provisions of § 80.1230(c)(1).

**§ 80.1354 What are the reporting requirements for the gasoline benzene program?**

(a) Beginning with the 2011 annual averaging period, or the 2015 annual averaging period for small refiners, and continuing for each averaging period thereafter, every refiner, for each of its refineries, and every importer shall submit to EPA the information required in this section, and such other information as EPA may require.

(b) Beginning with the 2007 annual averaging period for refiners generating early credits pursuant to § 80.1275 or § 80.1290(b) for approved small refiners, every refiner for each of its refineries shall submit to EPA the information required in this section, and such other information as EPA may require.

(c) *Refiner and importer annual reports.* Any refiner, for each of its refineries, and any importer for the gasoline it imports, shall submit a Gasoline Benzene Report containing the following information:

(1) Benzene volume percent and volume of any RFG, RBOB, and conventional gasoline, separately by batch, produced by the refinery or imported, and the sum of the volumes and the volume-weighted benzene concentration, in volume percent;

(2) The annual average benzene concentration, per § 80.1240, § 80.1275 or § 80.1290, as applicable;

(3) Any benzene deficit from the previous reporting period, per § 80.1230(b);

(4) The number of banked benzene credits from the previous reporting period;

(5) The number of benzene credits generated under § 80.1275, if applicable;

(6) The number of benzene credits generated under § 80.1290, if applicable;

(7) The number of benzene credits transferred to the refinery or importer, per § 80.1295(c), and the cost of the credits, if applicable;

(8) The number of benzene credits transferred from the refinery or importer, per § 80.1295(c), and the price of the credits, if applicable;

(9) The number of benzene credits terminated or expired;

(10) The compliance benzene value specified in § 80.1240;

(11) The number of banked benzene credits;

(12) Projected credit generation through compliance year 2015; and

(13) Projected credit use through compliance year 2015.

(d) EPA may require submission of additional information to verify compliance with the requirements of this subpart.

(e) The report required by paragraph (a) of this section shall be:

(1) Submitted on forms and following procedures specified by the Administrator of EPA;

(2) Submitted to EPA by the last day of February each year for the prior calendar year averaging period; and

(3) Signed and certified as correct by the owner or a responsible corporate officer of the refiner or importer.

**Attest Engagements**

**§ 80.1375 What are the attest engagement requirements for gasoline benzene compliance?**

In addition to the requirements for attest engagements that apply to refiners and importers under §§ 80.125 through 80.130, 80.410, and 80.1030, the attest engagements for refiners and importers must include the following procedures and requirements each year.

(a) *EPA early credit generation baseline years' reports.*

(1) Obtain and read a copy of the refinery's or importer's annual reports

and batch reports filed with EPA for 2004 and 2005 which contain gasoline benzene and gasoline volume information.

(2) Agree the yearly volumes of gasoline and benzene concentration, in volume percent and benzene gallons, reported to EPA in the reports specified in paragraph (a)(1) of this section with the inventory reconciliation analysis under § 80.128.

(3) Verify that the information in the refinery's or importer's batch reports filed with EPA under §§ 80.75 and 80.105, and any laboratory test results, agree with the information contained in the reports specified in paragraph (a)(1) of this section.

(4) Calculate the average benzene concentration for all of the refinery's or importer's gasoline volume over 2004 and 2005 and verify that those values agree with the values reported to EPA per § 80.1285.

(b) *Baseline for early credit generation.* For the first attest reporting period following approval of a benzene baseline:

(1) Obtain the EPA benzene baseline approval letter for the refinery to determine the refinery's applicable benzene baseline under § 80.1285.

(2) Obtain a written representation from the company representative stating the benzene value used as the refinery's baseline and agree that number to paragraph (b)(1) of this section and to the reports to EPA.

(c) *Early credit generation.* The following procedures shall be completed for a refinery or importer that generates early benzene credits per § 80.1275:

(1) Obtain the baseline benzene concentration and gasoline volume from paragraph (a)(4) of this section.

(2) Obtain the annual benzene report per § 80.1354.

(3) If the benzene value under paragraph (c)(2) of this section is at least 10 percent less than value in paragraph (c)(1) of this section, compute and report as a finding the difference according to § 80.1275.

(4) Compute and report as a finding the total number of benzene credits generated by multiplying the value calculated in paragraph (c)(3) of this section by the volume of gasoline listed in the report specified in paragraph (c)(2) of this section, and agree this number with the number reported to EPA.

(d) *Standard credit generation.* The following procedures shall be completed for a refinery or importer that generates benzene credits per § 80.1290:

(1) Obtain the annual average benzene value from the annual benzene report per § 80.1285.

(2) If the annual average benzene value under paragraph (d)(1) of this section is less than 0.62 percent by volume, compute and report as a finding the difference according to § 80.1290.

(3) Compute and report as a finding the total number of benzene credits generated by multiplying the value calculated in paragraph (d)(2) of this section by the volume of gasoline listed in the report specified in paragraph (d)(1) of this section, and agree this number with the number reported to EPA.

(e) *Credits required.* The following attest procedures shall be completed for refineries and importers:

(1) Obtain the annual average benzene concentration and volume from the annual benzene report per § 80.1285.

(2) If the value in paragraph (e)(1) of this section is greater than 0.62 percent by volume, compute and report as a finding the difference between 0.62 percent by volume and the value in paragraph (e)(1) of this section.

(3) Compute and report as a finding the total benzene credits required by multiplying the value in paragraph (e)(2) of this section times the volume of gasoline in paragraph (e)(1) of this section, and agree with the report to EPA.

(4) Obtain the refiner's or importer's representation as to the portion of the deficit under paragraph (e)(3) of this section that was resolved with credits, or that was carried forward as a deficit under § 80.1230(b), and agree with the report to EPA.

(f) *Credit purchases and sales.* The following attest procedures shall be completed for a refinery or importer that is a transferor or transferee of credits during an averaging period:

(1) Obtain contracts or other documents for all credits transferred to another refinery or importer during the year being reviewed; compute and report as a finding the number and year of creation of credits represented in these documents as being transferred; and agree with the report to EPA.

(2) Obtain contracts or other documents for all credits received during the year being reviewed; compute and report as a finding the number and year of creation of credits represented in these documents as being received; and agree with the report to EPA.

(g) *Credit reconciliation.* The following attest procedures shall be completed each year credits were in the refiner's or importer's possession at any time during the year:

(1) Obtain the credits remaining or the credit deficit from the previous year from the refiner's or importer's report to EPA for the previous year.

(2) Compute and report as a finding the net credits remaining at the conclusion of the year being reviewed by totaling:

(i) Credits remaining from the previous year; plus

(ii) Credits generated under paragraphs (c) and (d) of this section; plus

(iii) Credits purchased under paragraph (f) of this section; minus

(iv) Credits sold under paragraph (f) of this section; minus

(v) Credits used under paragraphs (e) of this section; minus

(vi) Credits expired; minus

(vii) Credit deficit from the previous year.

(3) Agree the credits remaining or the credit deficit at the conclusion of the year being reviewed with the report to EPA.

(4) If the refinery or importer had a credit deficit for both the previous year and the year being reviewed, report this fact as a finding.

#### Violations and Penalties

##### § 80.1400 What acts are prohibited under the gasoline benzene program?

No person shall:

(a) *Averaging violation.* Produce or import gasoline subject to this subpart that does not comply with the applicable benzene average standard requirement under § 80.1230.

(b) *Causing an averaging violation.* Cause another person to commit an act in violation of paragraph (a) of this section.

(c) Fail to meet the recordkeeping and reporting requirements, or any other requirements of this subpart.

##### § 80.1405 What evidence may be used to determine compliance with the prohibitions and requirements of this subpart and liability for violations of this subpart?

(a) Compliance with the benzene standard of this subpart shall be determined based on the benzene concentration of the gasoline, measured using the methodologies specified in § 80.46(e). Any evidence or information, including the exclusive use of such evidence or information, may be used to establish the benzene concentration of the gasoline if the evidence or information is relevant to whether the benzene concentration of the gasoline would have been in compliance with the standard if the appropriate sampling and testing methodologies had been correctly performed. Such evidence may be obtained from any source or location

and may include, but is not limited to, test results using methods other than those specified in § 80.46(e), business records and commercial documents.

(b) Determinations of compliance with the requirements of this subpart other than the benzene standard, and determinations of liability for any violation of this subpart, may be based on information from any source or location. Such information may include, but is not limited to, business records and commercial documents.

##### § 80.1410 Who is liable for violations under the gasoline benzene program?

(a) Persons liable for violations of prohibited acts.

(1) *Averaging violation.* Any refiner or importer that violates § 80.1400(a) is liable for a violation of § 80.1400(a).

(2) *Causing an averaging violation.* Any person that causes another party to violate § 80.1400(a) is liable for a violation of § 80.1400(b).

(3) *Parent corporation liability.* Any parent corporation is liable for any violations of this subpart that are committed by any of its wholly-owned subsidiaries.

(4) *Joint venture and joint owner liability.* Each partner to a joint venture, or each owner of a facility owned by two or more owners, is jointly and severally liable for any violation of this subpart that occurs at the joint venture facility or facility that is owned by the joint owners, or that is committed by the joint venture operation or any of the joint owners of the facility.

(b) Persons liable for failure to meet other provisions of this subpart.

(1) Any person that fails to meet a provision of this subpart not addressed in paragraph (a) of this section is liable for a violation of that provision.

(2) Any person that caused another person to fail to meet a requirement of this subpart not addressed in paragraph (a) of this section, is liable for causing a violation of that provision.

##### § 80.1415 What penalties apply under the gasoline benzene program?

(a) Any person liable for a violation under § 80.1410 is subject to civil penalties as specified in sections 205 and 211(d) of the Clean Air Act for every day of each such violation and the amount of economic benefit or savings resulting from each violation.

(b) Any person liable under § 80.1400(a) for a violation of the applicable benzene average standard or causing another person to violate the requirement during any averaging period, is subject to a separate day of violation for each and every day in the averaging period. Any person liable

under § 80.1410(b) for a failure to fulfill any requirement of credit generation, transfer, use, banking, or deficit carry-forward correction is subject to a separate violation for each and every day in the averaging period in which invalid credits are generated, banked, transferred or used.

(c) Any person liable under § 80.1410(b) for failure to meet, or causing a failure to meet, a provision of this subpart is liable for a separate day of violation for each and every day such provision remains unfulfilled.

### Foreign Refiners

#### § 80.1420 What are the additional requirements under this subpart for gasoline produced at foreign refineries?

(a) *Definitions.* (1) A *foreign refinery* is a refinery that is located outside the United States, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands (collectively referred to in this section as “the United States”).

(2) A *foreign refiner* is a person that meets the definition of refiner under § 80.2(i) for a foreign refinery.

(3) *Benzene-FRGAS* means gasoline produced at a foreign refinery that has been assigned an individual refinery benzene baseline under § 80.1285, has been approved as a small refiner under § 80.1340, or has been granted temporary relief under § 80.1335, and that is imported into the United States.

(4) *Non-Benzene-FRGAS* means

(i) Gasoline meeting any of the conditions specified in paragraph (a)(3) of this section that is not imported into the United States.

(ii) Gasoline meeting any of the conditions specified in paragraph (a)(3) of this section during a year when the foreign refiner has opted to not participate in the Benzene-FRGAS program under paragraph (c)(3) of this section.

(iii) Gasoline produced at a foreign refinery that has not been assigned an individual refinery benzene baseline under § 80.1285, or that has not been approved as a small refiner under § 80.1340, or that has not been granted temporary relief under § 80.1335.

(5) *Certified Benzene-FRGAS* means Benzene-FRGAS the foreign refiner intends to include in the foreign refinery's benzene compliance calculations under § 80.1240 or credit calculations under § 80.1275 and does include in these calculations when reported to EPA.

(7) *Non-Certified Benzene-FRGAS* means Benzene-FRGAS that is not Certified Benzene-FRGAS.

(b) *Baseline for early credits.* For any foreign refiner to obtain approval under the benzene foreign refiner program of this subpart for any refinery in order to generate early credits under § 80.1275, it must apply for approval under the applicable provisions of this subpart.

(1) The refiner shall follow the procedures, applicable to volume baselines in §§ 80.91 through 80.93 to establish the volume of gasoline that was produced at the refinery and imported into the United States during the applicable years for purposes of establishing a baseline under § 80.1280 for applicable fuels produced for use in the United States.

(2) In making determinations for foreign refinery baselines EPA will consider all information supplied by a foreign refiner, and in addition may rely on any and all appropriate assumptions necessary to make such determinations.

(3) Where a foreign refiner submits a petition that is incomplete or inadequate to establish an accurate baseline, and the refiner fails to correct this deficiency after a request for more information, EPA will not assign an individual refinery baseline.

(c) *General requirements for Benzene-FRGAS foreign refiners.* A foreign refiner of a refinery that is approved under the benzene foreign refiner program of this subpart must designate each batch of gasoline produced at the foreign refinery that is exported to the United States as either Certified Benzene-FRGAS or as Non-Certified Benzene-FRGAS, except as provided in paragraph (c)(3) of this section.

(1) In the case of Certified Benzene-FRGAS, the foreign refiner must meet all requirements that apply to refiners under this subpart.

(2) In the case of Non-Certified Benzene-FRGAS, the foreign refiner shall meet all the following requirements:

(i) The designation requirements in this section;

(ii) The recordkeeping requirements in this section and in § 80.1350;

(iii) The reporting requirements in this section and in §§ 80.1352 and 80.1354;

(iv) The product transfer document requirements in this section;

(v) The prohibitions in this section and in § 80.1400; and

(vi) The independent audit requirements in this section and in § 80.1375.

(3)(i) Any foreign refiner that generates early benzene credits under § 80.1275 shall designate all Benzene-FRGAS as Certified Benzene-FRGAS for any year that such credits are generated.

(ii) Any foreign refiner that has been approved to produce gasoline subject to the benzene foreign refiner program for a foreign refinery under this subpart may elect to classify no gasoline imported into the United States as Benzene-FRGAS provided the foreign refiner notifies EPA of the election no later than November 1 preceding the beginning of the next compliance period.

(iii) An election under paragraph (c)(3)(ii) of this section shall be for a 12 month compliance period and apply to all gasoline that is produced by the foreign refinery that is imported into the United States, and shall remain in effect for each succeeding year unless and until the foreign refiner notifies EPA of the termination of the election. The change in election shall take effect at the beginning of the next annual compliance period.

(d) *Designation, product transfer documents, and foreign refiner certification.* (1) Any foreign refiner of a foreign refinery that has been approved by EPA to produce gasoline subject to the benzene foreign refiner program must designate each batch of Benzene-FRGAS as such at the time the gasoline is produced, unless the refiner has elected to classify no gasoline exported to the United States as Benzene-FRGAS under paragraph (c)(3) of this section.

(2) On each occasion when any person transfers custody or title to any Benzene-FRGAS prior to its being imported into the United States, it must include the following information as part of the product transfer document information:

(i) Designation of the gasoline as Certified Benzene-FRGAS or as Non-Certified Benzene-FRGAS; and

(ii) The name and EPA refinery registration number of the refinery where the Benzene-FRGAS was produced.

(3) On each occasion when Benzene-FRGAS is loaded onto a vessel or other transportation mode for transport to the United States, the foreign refiner shall prepare a certification for each batch of the Benzene-FRGAS that meets the following requirements.

(i) The certification shall include the report of the independent third party under paragraph (f) of this section, and the following additional information:

(A) The name and EPA registration number of the refinery that produced the Benzene-FRGAS;

(B) The identification of the gasoline as Certified Benzene-FRGAS or Non-Certified Benzene-FRGAS;

(C) The volume of Benzene-FRGAS being transported, in gallons;

(D) In the case of Certified Benzene-FRGAS:

(1) The benzene content as determined under paragraph (f) of this section, and the applicable designations stated in paragraph (d)(2)(i) of this section; and

(2) A declaration that the Benzene-FRGAS is being included in the applicable compliance calculations required by EPA under this subpart.

(ii) The certification shall be made part of the product transfer documents for the Benzene-FRGAS.

(e) *Transfers of Benzene-FRGAS to non-United States markets.* The foreign refiner is responsible to ensure that all gasoline classified as Benzene-FRGAS is imported into the United States. A foreign refiner may remove the Benzene-FRGAS classification, and the gasoline need not be imported into the United States, but only if:

(1) The foreign refiner excludes:

(i) The volume of gasoline from the refinery's compliance report under § 80.1354; and

(ii) In the case of Certified Benzene-FRGAS, the volume of the gasoline from the compliance report under § 80.1354.

(2) The foreign refiner obtains sufficient evidence in the form of documentation that the gasoline was not imported into the United States.

(f) *Load port independent sampling, testing and refinery identification.* (1) On each occasion that Benzene-FRGAS is loaded onto a vessel for transport to the United States a foreign refiner shall have an independent third party:

(i) Inspect the vessel prior to loading and determine the volume of any tank bottoms;

(ii) Determine the volume of Benzene-FRGAS loaded onto the vessel (exclusive of any tank bottoms before loading);

(iii) Obtain the EPA-assigned registration number of the foreign refinery;

(iv) Determine the name and country of registration of the vessel used to transport the Benzene-FRGAS to the United States; and

(v) Determine the date and time the vessel departs the port serving the foreign refinery.

(2) On each occasion that Certified Benzene-FRGAS is loaded onto a vessel for transport to the United States a foreign refiner shall have an independent third party:

(i) Collect a representative sample of the Certified Benzene-FRGAS from each vessel compartment subsequent to loading on the vessel and prior to departure of the vessel from the port serving the foreign refinery;

(ii) Determine the benzene content value for each compartment using the

methodology as specified in § 80.46(e) by one of the following:

(A) The third party analyzing each sample; or

(B) The third party observing the foreign refiner analyze the sample;

(iii) Review original documents that reflect movement and storage of the Certified Benzene-FRGAS from the refinery to the load port, and from this review determine:

(A) The refinery at which the Benzene-FRGAS was produced; and

(B) That the Benzene-FRGAS remained segregated from:

(1) Non-Benzene-FRGAS and Non-Certified Benzene-FRGAS; and

(2) Other Certified Benzene-FRGAS produced at a different refinery.

(3) The independent third party shall submit a report:

(i) To the foreign refiner containing the information required under paragraphs (f)(1) and (f)(2) of this section, to accompany the product transfer documents for the vessel; and

(ii) To the Administrator containing the information required under paragraphs (f)(1) and (f)(2) of this section, within thirty days following the date of the independent third party's inspection. This report shall include a description of the method used to determine the identity of the refinery at which the gasoline was produced, assurance that the gasoline remained segregated as specified in paragraph (n)(1) of this section, and a description of the gasoline's movement and storage between production at the source refinery and vessel loading.

(4) The independent third party must:

(i) Be approved in advance by EPA, based on a demonstration of ability to perform the procedures required in this paragraph (f);

(ii) Be independent under the criteria specified in § 80.65(e)(2)(iii); and

(iii) Sign a commitment that contains the provisions specified in paragraph (i) of this section with regard to activities, facilities and documents relevant to compliance with the requirements of this paragraph (f).

(g) *Comparison of load port and port of entry testing.* (1)(i) Any foreign refiner and any United States importer of Certified Benzene-FRGAS shall compare the results from the load port testing under paragraph (f) of this section, with the port of entry testing as reported under paragraph (o) of this section, for the volume of gasoline and the benzene content value; except as specified in paragraph (g)(1)(ii) of this section.

(ii) Where a vessel transporting Certified Benzene-FRGAS off loads this gasoline at more than one United States port of entry, and the conditions of

paragraph (g)(2)(i) of this section are met at the first United States port of entry, the requirements of paragraph (g)(2) of this section do not apply at subsequent ports of entry if the United States importer obtains a certification from the vessel owner that meets the requirements of paragraph(s) of this section, that the vessel has not loaded any gasoline or blendstock between the first United States port of entry and the subsequent port of entry.

(2)(i) The requirements of this paragraph (g)(2) apply if—

(A) The temperature-corrected volumes determined at the port of entry and at the load port differ by more than one percent; or

(B) The benzene content value determined at the port of entry is higher than the benzene content value determined at the load port, and the amount of this difference is greater than the reproducibility amount specified for the port of entry test result by the American Society of Testing and Materials (ASTM) for the test method specified at § 80.46(e).

(ii) The United States importer and the foreign refiner shall treat the gasoline as Non-Certified Benzene-FRGAS, and the foreign refiner shall exclude the gasoline volume from its gasoline volumes calculations and benzene standard designations under this subpart.

(h) *Attest requirements.* Refiners, for each annual compliance period, must arrange to have an attest engagement performed of the underlying documentation that forms the basis of any report required under this subpart. The attest engagement must comply with the procedures and requirements that apply to refiners under §§ 80.125 through 80.130, or other applicable attest engagement provisions, and must be submitted to the Administrator of EPA by August 31 of each year for the prior annual compliance period. The following additional procedures shall be carried out for any foreign refiner of Benzene-FRGAS.

(1) The inventory reconciliation analysis under § 80.128(b) and the tender analysis under § 80.128(c) shall include Non-Benzene-FRGAS.

(2) Obtain separate listings of all tenders of Certified Benzene-FRGAS and of Non-Certified Benzene-FRGAS, and obtain separate listings of Certified Benzene-FRGAS based on whether it is small refiner gasoline, gasoline produced through the use of credits, or other applicable designation under this subpart. Agree the total volume of tenders from the listings to the gasoline inventory reconciliation analysis in § 80.128(b), and to the volumes

determined by the third party under paragraph (f)(1) of this section.

(3) For each tender under paragraph (h)(2) of this section, where the gasoline is loaded onto a marine vessel, report as a finding the name and country of registration of each vessel, and the volumes of Benzene-FRGAS loaded onto each vessel.

(4) Select a sample from the list of vessels identified in paragraph (h)(3) of this section used to transport Certified Benzene-FRGAS, in accordance with the guidelines in § 80.127, and for each vessel selected perform the following:

(i) Obtain the report of the independent third party, under paragraph (f) of this section, and of the United States importer under paragraph (o) of this section.

(A) Agree the information in these reports with regard to vessel identification, gasoline volumes and benzene content test results.

(B) Identify, and report as a finding, each occasion the load port and port of entry benzene content and volume results differ by more than the amounts allowed in paragraph (g) of this section, and determine whether the foreign refiner adjusted its refinery calculations as required in paragraph (g) of this section.

(ii) Obtain the documents used by the independent third party to determine transportation and storage of the Certified Benzene-FRGAS from the refinery to the load port, under paragraph (f) of this section. Obtain tank activity records for any storage tank where the Certified Benzene-FRGAS is stored, and pipeline activity records for any pipeline used to transport the Certified Benzene-FRGAS, prior to being loaded onto the vessel. Use these records to determine whether the Certified Benzene-FRGAS was produced at the refinery that is the subject of the attest engagement, and whether the Certified Benzene-FRGAS was mixed with any Non-Certified Benzene-FRGAS, Non-Benzene-FRGAS, or any Certified Benzene-FRGAS produced at a different refinery.

(5) Select a sample from the list of vessels identified in paragraph (h)(3) of this section used to transport Certified and Non-Certified Benzene-FRGAS, in accordance with the guidelines in § 80.127, and for each vessel selected perform the following:

(i) Obtain a commercial document of general circulation that lists vessel arrivals and departures, and that includes the port and date of departure of the vessel, and the port of entry and date of arrival of the vessel.

(ii) Agree the vessel's departure and arrival locations and dates from the

independent third party and United States importer reports to the information contained in the commercial document.

(6) Obtain separate listings of all tenders of Non-Benzene-FRGAS, and perform the following:

(i) Agree the total volume and benzene content of tenders from the listings to the gasoline inventory reconciliation analysis in § 80.128(b).

(ii) Obtain a separate listing of the tenders under this paragraph (h)(6) where the gasoline is loaded onto a marine vessel. Select a sample from this listing in accordance with the guidelines in § 80.127, and obtain a commercial document of general circulation that lists vessel arrivals and departures, and that includes the port and date of departure and the ports and dates where the gasoline was off loaded for the selected vessels. Determine and report as a finding the country where the gasoline was off loaded for each vessel selected.

(7) In order to complete the requirements of this paragraph (h) an auditor shall:

(i) Be independent of the foreign refiner;

(ii) Be licensed as a Certified Public Accountant in the United States and a citizen of the United States, or be approved in advance by EPA based on a demonstration of ability to perform the procedures required in §§ 80.125 through 80.130 and this paragraph (h); and

(iii) Sign a commitment that contains the provisions specified in paragraph (i) of this section with regard to activities and documents relevant to compliance with the requirements of §§ 80.125 through 80.130 and this paragraph (h).

(i) *Foreign refiner commitments.* Any foreign refiner shall commit to and comply with the provisions contained in this paragraph (i) as a condition to being approved for as a foreign refiner under this subpart.

(1) Any United States Environmental Protection Agency inspector or auditor must be given full, complete and immediate access to conduct inspections and audits of the foreign refinery.

(i) Inspections and audits may be either announced in advance by EPA, or unannounced.

(ii) Access will be provided to any location where:

(A) Gasoline is produced;

(B) Documents related to refinery operations are kept;

(C) Gasoline or blendstock samples are tested or stored; and

(D) Benzene-FRGAS is stored or transported between the foreign refinery

and the United States, including storage tanks, vessels and pipelines.

(iii) Inspections and audits may be by EPA employees or contractors to EPA.

(iv) Any documents requested that are related to matters covered by inspections and audits must be provided to an EPA inspector or auditor on request.

(v) Inspections and audits by EPA may include review and copying of any documents related to:

(A) Refinery baseline establishment, if applicable, including the volume and benzene content of gasoline; transfers of title or custody of any gasoline or blendstocks whether Benzene-FRGAS or Non-Benzene-FRGAS, produced at the foreign refinery during the period January 1, 2004 through December 31, 2005, and any work papers related to refinery baseline establishment;

(B) The volume and benzene content of Benzene-FRGAS;

(C) The proper classification of gasoline as being Benzene-FRGAS or as not being Benzene-FRGAS, or as Certified Benzene-FRGAS or as Non-Certified Benzene-FRGAS, and all other relevant designations under this subpart;

(D) Transfers of title or custody to Benzene-FRGAS;

(E) Sampling and testing of Benzene-FRGAS;

(F) Work performed and reports prepared by independent third parties and by independent auditors under the requirements of this section, including work papers; and

(G) Reports prepared for submission to EPA, and any work papers related to such reports.

(vi) Inspections and audits by EPA may include taking samples of gasoline, gasoline additives or blendstock, and interviewing employees.

(vii) Any employee of the foreign refiner must be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(viii) English language translations of any documents must be provided to an EPA inspector or auditor, on request, within 10 working days.

(ix) English language interpreters must be provided to accompany EPA inspectors and auditors, on request.

(2) An agent for service of process located in the District of Columbia shall be named, and service on this agent constitutes service on the foreign refiner or any employee of the foreign refiner for any action by EPA or otherwise by the United States related to the requirements of this subpart.

(3) The forum for any civil or criminal enforcement action related to the



provisions of this section for violations of the Clean Air Act or regulations promulgated thereunder shall be governed by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.

(4) United States substantive and procedural laws shall apply to any civil or criminal enforcement action against the foreign refiner or any employee of the foreign refiner related to the provisions of this section.

(5) Submitting a petition for participation in the benzene foreign refiner program or producing and exporting gasoline under any such program, and all other actions to comply with the requirements of this subpart relating to participation in any benzene foreign refiner program, or to establish an individual refinery gasoline benzene baseline under this subpart constitute actions or activities covered by and within the meaning of the provisions of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign refiner, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign refiner under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(6) The foreign refiner, or its agents or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors, whether EPA employees or EPA contractors, for actions performed within the scope of EPA employment related to the provisions of this section.

(7) The commitment required by this paragraph (i) shall be signed by the owner or president of the foreign refiner business.

(8) In any case where Benzene-FRGAS produced at a foreign refinery is stored or transported by another company between the refinery and the vessel that transports the Benzene-FRGAS to the United States, the foreign refiner shall obtain from each such other company a commitment that meets the requirements specified in paragraphs (i)(1) through (7) of this section, and these commitments shall be included in the foreign refiner's petition to participate in any benzene foreign refiner program.

(j) *Sovereign immunity.* By submitting a petition for participation in any benzene foreign refiner program under this subpart (and baseline, if applicable) under this section, or by producing and exporting gasoline to the United States under any such program, the foreign

refiner, and its agents and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States without limitation based on sovereign immunity, with respect to actions instituted against the foreign refiner, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign refiner under this subpart, including conduct that violates the False Statements Accountability Act of 1996 (18 U.S.C. 1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413).

(k) *Bond posting.* Any foreign refiner shall meet the requirements of this paragraph (k) as a condition to approval as benzene foreign refiner under this subpart.

(1) The foreign refiner shall post a bond of the amount calculated using the following equation:

$$\text{Bond} = G \times \$ 0.01$$

Where:

Bond = amount of the bond in U.S. dollars

G = the largest volume of gasoline produced at the foreign refinery and exported to the United States, in gallons, during a single calendar year among the most recent of the following calendar years, up to a maximum of five calendar years: the calendar year immediately preceding the date the refinery's baseline petition is submitted, the calendar year the baseline petition is submitted, and each succeeding calendar year.

(2) Bonds shall be posted by:

(i) Paying the amount of the bond to the Treasurer of the United States;

(ii) Obtaining a bond in the proper amount from a third party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign refiner, provided EPA agrees in advance as to the third party and the nature of the surety agreement; or

(iii) An alternative commitment that results in assets of an appropriate liquidity and value being readily available to the United States, provided EPA agrees in advance as to the alternative commitment.

(3) Bonds posted under this paragraph (k) shall—

(i) Be used to satisfy any judicial judgment that results from an administrative or judicial enforcement action for conduct in violation of this subpart, including where such conduct violates the False Statements Accountability Act of 1996 (18 U.S.C.

1001) and section 113(c)(2) of the Clean Air Act (42 U.S.C. 7413);

(ii) Be provided by a corporate surety that is listed in the United States Department of Treasury Circular 570 "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds"; and

(iii) Include a commitment that the bond will remain in effect for at least five years following the end of latest annual reporting period that the foreign refiner produces gasoline pursuant to the requirements of this subpart.

(4) On any occasion a foreign refiner bond is used to satisfy any judgment, the foreign refiner shall increase the bond to cover the amount used within 90 days of the date the bond is used.

(5) If the bond amount for a foreign refiner increases, the foreign refiner shall increase the bond to cover the shortfall within 90 days of the date the bond amount changes. If the bond amount decreases, the foreign refiner may reduce the amount of the bond beginning 90 days after the date the bond amount changes.

(l) [Reserved]

(m) *English language reports.* Any report or other document submitted to EPA by a foreign refiner shall be in English language, or shall include an English language translation.

(n) *Prohibitions.* (1) No person may combine Certified Benzene-FRGAS with any Non-Certified Benzene-FRGAS or Non-Benzene-FRGAS, and no person may combine Certified Benzene-FRGAS with any Certified Benzene-FRGAS produced at a different refinery, until the importer has met all the requirements of paragraph (o) of this section, except as provided in paragraph (e) of this section.

(2) No foreign refiner or other person may cause another person to commit an action prohibited in paragraph (n)(1) of this section, or that otherwise violates the requirements of this section.

(o) *United States importer requirements.* Any United States importer shall meet the following requirements:

(1) Each batch of imported gasoline shall be classified by the importer as being Benzene-FRGAS or as Non-Benzene-FRGAS, and each batch classified as Benzene-FRGAS shall be further classified as Certified Benzene-FRGAS or as Non-Certified Benzene-FRGAS.

(2) Gasoline shall be classified as Certified Benzene-FRGAS or as Non-Certified Benzene-FRGAS according to the designation by the foreign refiner if this designation is supported by product transfer documents prepared by the foreign refiner as required in paragraph

(d) of this section, unless the gasoline is classified as Non-Certified Benzene-FRGAS under paragraph (g) of this section. Additionally, the importer shall comply with all requirements of this subpart applicable to importers.

(3) For each gasoline batch classified as Benzene-FRGAS, any United States importer shall perform the following procedures.

(i) In the case of both Certified and Non-Certified Benzene-FRGAS, have an independent third party:

(A) Determine the volume of gasoline in the vessel;

(B) Use the foreign refiner's Benzene-FRGAS certification to determine the name and EPA-assigned registration number of the foreign refinery that produced the Benzene-FRGAS;

(C) Determine the name and country of registration of the vessel used to transport the Benzene-FRGAS to the United States; and

(D) Determine the date and time the vessel arrives at the United States port of entry.

(ii) In the case of Certified Benzene-FRGAS, have an independent third party:

(A) Collect a representative sample from each vessel compartment subsequent to the vessel's arrival at the United States port of entry and prior to off loading any gasoline from the vessel;

(B) Obtain the compartment samples; and

(C) Determine the benzene content value of each compartment sample using the methodology specified at 80.46(e) by the third party analyzing the sample or by the third party observing the importer analyze the sample.

(4) Any importer shall submit reports within 30 days following the date any vessel transporting Benzene-FRGAS arrives at the United States port of entry:

(i) To the Administrator containing the information determined under paragraph (o)(3) of this section; and

(ii) To the foreign refiner containing the information determined under paragraph (o)(3)(ii) of this section, and including identification of the port at which the product was offloaded.

(5) Any United States importer shall meet all other requirements of this subpart, for any imported gasoline that is not classified as Certified Benzene-FRGAS under paragraph (o)(2) of this section.

(p) *Truck imports of Certified Benzene-FRGAS produced at a foreign refinery.* (1) Any refiner whose Certified Benzene-FRGAS is transported into the United States by truck may petition EPA to use alternative procedures to meet the following requirements:

(i) Certification under paragraph (d)(5) of this section;

(ii) Load port and port of entry sampling and testing under paragraphs (f) and (g) of this section;

(iii) Attest under paragraph (h) of this section; and

(iv) Importer testing under paragraph (o)(3) of this section.

(2) These alternative procedures must ensure Certified Benzene-FRGAS remains segregated from Non-Certified Benzene-FRGAS and from Non-Benzene-FRGAS until it is imported into the United States. The petition will be evaluated based on whether it adequately addresses the following:

(i) Provisions for monitoring pipeline shipments, if applicable, from the refinery, that ensure segregation of Certified Benzene-FRGAS from that refinery from all other gasoline;

(ii) Contracts with any terminals and/or pipelines that receive and/or transport Certified Benzene-FRGAS, that prohibit the commingling of Certified Benzene-FRGAS with any of the following:

(A) Other Certified Benzene-FRGAS from other refineries.

(B) All Non-Certified Benzene-FRGAS.

(C) All Non-Benzene-FRGAS;

(iii) Procedures for obtaining and reviewing truck loading records and United States import documents for Certified Benzene-FRGAS to ensure that such gasoline is only loaded into trucks making deliveries to the United States;

(iv) Attest procedures to be conducted annually by an independent third party that review loading records and import documents based on volume reconciliation, or other criteria, to confirm that all Certified Benzene-FRGAS remains segregated throughout the distribution system and is only loaded into trucks for import into the United States.

(3) The petition required by this section must be submitted to EPA along with the application for temporary refiner relief individual refinery benzene standard under this subpart.

(q) *Withdrawal or suspension of foreign refiner status.* EPA may withdraw or suspend a foreign refiner's benzene baseline or standard approval for a foreign refinery where—

(1) A foreign refiner fails to meet any requirement of this section;

(2) A foreign government fails to allow EPA inspections as provided in paragraph (i)(1) of this section;

(3) A foreign refiner asserts a claim of, or a right to claim, sovereign immunity in an action to enforce the requirements in this subpart; or

(4) A foreign refiner fails to pay a civil or criminal penalty that is not satisfied using the foreign refiner bond specified in paragraph (k) of this section.

(r) *Early use of a foreign refiner benzene baseline.* (1) A foreign refiner may begin using an individual refinery benzene baseline under this subpart before EPA has approved the baseline, provided that:

(i) A baseline petition has been submitted as required in paragraph (b) of this section;

(ii) EPA has made a provisional finding that the baseline petition is complete;

(iii) The foreign refiner has made the commitments required in paragraph (i) of this section;

(iv) The persons that will meet the independent third party and independent attest requirements for the foreign refinery have made the commitments required in paragraphs (f)(3)(iii) and (h)(7)(iii) of this section; and

(v) The foreign refiner has met the bond requirements of paragraph (k) of this section.

(2) In any case where a foreign refiner uses an individual refinery baseline before final approval under paragraph (r)(1) of this section, and the foreign refinery baseline values that ultimately are approved by EPA are more stringent than the early baseline values used by the foreign refiner, the foreign refiner shall recalculate its compliance, ab initio, using the baseline values approved by the EPA, and the foreign refiner shall be liable for any resulting violation of the requirements of this subpart.

(s) *Additional requirements for petitions, reports and certificates.* Any petition for approval to produce gasoline subject to the benzene foreign refiner program, any alternative procedures under paragraph (p) of this section, any report or other submission required by paragraph (c), (f)(2), or (i) of this section, and any certification under paragraph (d)(3) of this section shall be—

(1) Submitted in accordance with procedures specified by the Administrator, including use of any forms that may be specified by the Administrator.

(2) Be signed by the president or owner of the foreign refiner company, or by that person's immediate designee, and shall contain the following declaration:

I hereby certify: (1) That I have actual authority to sign on behalf of and to bind [insert name of foreign refiner] with regard to all statements contained herein; (2) that I am aware that the information contained herein is being Certified, or submitted to the United States Environmental Protection Agency, under the requirements of 40 CFR part 80, subpart L, and that the information is