Chapter VIII: Regulatory Flexibility

This chapter presents our Initial Regulatory Flexibility Analysis (IRFA) which evaluates the impacts of the proposed Tier 2 and gasoline sulfur standards on small businesses. This analysis has the following objectives: 1) to specify an appropriate definition for "small business" for entities subject to the final rule, 2) to characterize small businesses in the petroleum refining and motor vehicle manufacturing industries (described in more detail below in Table VIII-1), 3) to assess the impact of the proposed standards on these businesses, and 4) to evaluate the relief provided by regulatory alternatives.

A. Requirements of the Regulatory Flexibility Act

When proposing and promulgating rules subject to notice and comment under the Clean Air Act, we are generally required under the Regulatory Flexibility Act (RFA) to conduct a regulatory flexibility analysis unless we certify that the requirements of a regulation will not cause a significant impact on a substantial number of small entities. The key elements of the IRFA include:

- the number of affected small entities;
- the projected reporting, record keeping, and other compliance requirements of the proposed rule, including the classes of small entities that would be affected and the type of professional skills necessary for preparation of the report or record;
- other federal rules that may duplicate, overlap, or conflict with the proposed rule; and,
- any significant alternatives to the proposed rule that accomplish the stated objectives of applicable statutes and which minimize significant economic impacts of the proposed rule on small entities.

The Regulatory Flexibility was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), to ensure that concerns regarding small entities are adequately considered during the development of new regulations that affect them.

In developing the NPRM, we concluded that the proposed Tier 2 and gasoline sulfur standards would likely have a significant impact on a substantial number of small entities. To comply with the requirements of the RFA, we were required to quantify these economic impacts. The methodology used to calculate the per-refinery costs for desulfurizing gasoline is located above in Chapter 5.B.; the cost for an average small refiner to comply with the 30 ppm standard is described below in section C.

Based on the results of our economic analyses, we convened a Small Business Advocacy

Review Panel (the Panel), as required by SBREFA. The purpose of the Panel was to collect the advice and recommendations of small entity representatives (SERs) that would be affected by the proposed Tier 2 and gasoline sulfur standards. The report of the Panel has been placed in the rulemaking record.[1]

B. Description of Affected Entities

A Tier 2 program establishing stringent vehicle emission standards and requiring reductions in gasoline sulfur content would primarily affect manufacturers of LDVs, LDTs, HDGVs, and oil refiners that produce gasoline. Most companies in these industries do not meet the small business definitions provided in the U.S. Small Business Administration (SBA) regulations (13 CFR Part 121). However, we have identified several companies within these industries that are small businesses as defined by SBA. These businesses may be subject to the Tier 2 vehicle and gasoline sulfur standards and could be significantly impacted by the new standards. Table VIII-1, below, describes the affected industries, including the small business size standards SBA has established for each type of economic activity under the Standard Industrial Classification (SIC) and North American Industrial Classification systems.

Table VIII-1. Industries Containing Small Businesses Potentially Affected by Today's Proposed Rule

Industry	*NAICS[1] Codes*	*SIC[2] Codes*	*Defined by SBA as a Small Business If:[3]*
Petroleum Refiners	324110	2911	< 1500 employees
Petroleum Marketers and Distributors	422710 422720	5171 5172	< 100 employees
Independent Commercial Importers of Vehicles and Vehicle Components	811112 811198 541514	7533 7549 8742	< $5 million annual sales
Alternative Fuel Vehicle Converters	336311 541690	3592 8931	< 500 employees
	336312	3714	< 750 employees
	422720	5172	< 100 employees
	454312 811198 541514	5984 7549 8742	< $5 million annual sales
Motor Vehicle Manufacturers	336111 336112 336120	3711	< 1000 employees

1) North American Industry Classification System
2) Standard Industrial Classification system
3) According to SBA's regulations (13 CFR 121), businesses with no more than the listed number of employees or dollars in annual receipts are considered "small entities" for purposes of a regulatory flexibility analysis.

1. Small Refiners

Of the approximately 160 petroleum refineries that currently produce gasoline in the U.S., about 15 meet SBA's definition of a small business. SBA's SIC code for petroleum refining is 2911. According to this code, a petroleum refining company must have fewer than 1500 employees to qualify as a SBA small business. In the event that we propose gasoline sulfur control, some small refiners could have greater difficulty than larger refiners in complying with the standard(s), due to such factors as limited operational flexibility, lack of access to alternate crude oil feedstocks, limited availability of new sulfur reduction equipment, or difficulty in raising capital to finance projects.

2. Small Petroleum Marketers

While refiners would be the primary affected parties in a gasoline sulfur control program, some marketers of gasoline, many of which are small by SBA definitions, may be directly subject to the rule and could be adversely impacted by it. This impact appears to be limited to new or expanded requirements for reporting the sulfur content of gasoline samples.

SBA defines small businesses in this category (SIC codes 5171 and 5172) as those with fewer than 100 employees. There are several hundred small gasoline marketers participating at various points in the national gasoline distribution system.

3. Small Certifiers of Covered Vehicles

In addition to the major vehicle manufacturers, three distinct categories of businesses relating to LDV, LDTs, and HDGVs exist that would be covered by Tier 2 emission standards. Some companies in each of these categories are small businesses according to SBA regulations.

Small Independent Commercial Importers

Independent Commercial Importers are companies that hold a Certificate (or Certificates) of Conformity which permits them to alter imported vehicles to meet U.S. emission standards. As with alternative fuel vehicle converters described below, these businesses could face greater technical challenges if emission standards are tightened. We have identified five businesses in this category that are currently active and that appear to be small entities under SBA regulations.

Alternative Fuel Vehicle Converters

Under certain circumstances, our current policy permits the conversion of gasoline or diesel vehicles to operate on an alternative fuel without applying for and receiving the EPA Certificate of Conformity (also known as the “certification” process) that is required of conventional manufacturers. However, certification can provide certain benefits to a converter, and a few businesses have completed certification or have expressed interest in certifying alternative fueled vehicle models. Beginning in model year 2000, converters must seek a certificate for all of their vehicle models, although there will be some aspects of the certification process that will be simplified for small volume manufacturers (SVMs), including these converters. To the extent that companies are involved in this business when Tier 2 emission standards become effective, they would be subject to such standards and could face greater technical challenges in achieving the new standards with the vehicles they convert.

Small Volume Vehicle Manufacturers

We permit vehicle manufacturers selling 10,000 or fewer vehicles per year to be designated as SVMs. This status allows vehicle models to be certified under a slightly simpler certification process. More stringent Tier 2 standards could be relatively more difficult for small manufacturers to achieve than larger manufacturers to the extent that research and development resources are more limited. Less than five current SVMs meet the SBA guidelines for vehicle manufacturers of 1000 or fewer employees.

C. Projected Costs of the Proposed Gasoline Sulfur Standards

The costs for an average-size small refinery (19,000 bbls gasoline/day) to produce gasoline with a sulfur level of 30 ppm are described below in Table VIII-2. A more detailed discussion of our refinery cost analysis, in general, can be found above in Chapter 5.

Table VIII-2. Costs for a 19,000 bbls gasoline/day Refinery to Produce 30 ppm Gasoline

Location	*Per-Gallon Cost (cents/gallon)*	*Operating Cost ($million/year)*	*Capital Cost ($million/year)*
PADD III	2.9	8	16
PADD IV	3.4	9	22

Costs for a small refinery located in PADD II to produce 30 ppm gasoline would fall between the costs for a refinery in PADD III and a refinery in PADD IV.

In comparison, the average annual sales of small refiners in the U.S. were approximately $385 million for 1997 based on data obtained from Dun & Bradstreet.

D. The Types and Number of Small Entities to Which the Proposed Rule Would Apply

The types and number of small entities to which the proposed rule would apply are described in Table VIII-3, below.

Table VIII-3. Types and Number of Small Entities to Which the Proposed Tier 2/Gasoline Sulfur Rule Would Apply

Type of Small Entity	*Number of Companies Affected by Today's Rule*
Small Refiners	Approximately 17
Small Gasoline Marketers	Several Hundred
Small Certifiers of Covered Vehicles	Approximately 15

Using our 1990 refinery baseline data, established for the purposes of the RFG and anti-dumping programs, we have estimated that small refiners produce approximately 3.5 percent of all gasoline in the U.S. Furthermore, of the 17 refineries that we have identified as meeting SBA's definition of small business, nine already have gasoline sulfur levels less than 90 ppm. Therefore, approximately eight small refineries (out of 160 refineries in the U.S.) will need to significantly reduce their gasoline sulfur levels to comply with the proposed gasoline sulfur standards.

We are also aware that there are several hundred gasoline distributors/marketers in the U.S. The proposed rule may include a new requirement for them to add sulfur content to the set of gasoline quality parameters they currently report or record. However, this requirement should not be burdensome since sulfur content is generally measured along with other parameters and the results would simply need to be recorded and reported.

E. Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule

We are proposing to require that refiners and importers keep and make available to us certain records which demonstrate compliance with the sulfur program requirements. These records include information about each batch of gasoline produced or imported, including batch volume, sulfur test results and calculations used to determine compliance. We believe that the proposed recordkeeping requirements for refiners and importers are necessary to allow independent auditors and our inspectors to determine if the gasoline produced or imported, in fact, met the applicable sulfur standards when it left the refinery or import facility. A similar record retention requirement is included in the RFG and anti-dumping regulations.

Because the information required to be reported under today's rule in many cases is not included in the RFG and anti-dumping compliance reports, and because we believe it would be difficult to adapt the present RFG and anti-dumping reports to include the information required under today's proposed rule, we are proposing to require refiners and importers to submit a separate annual sulfur compliance report along with the refiner's or importer's RFG and/or anti-dumping compliance reports. The sulfur report form would be relatively short and would require only the minimum information necessary to demonstrate compliance with the applicable sulfur standards. Parties would be required to include the refiner and refinery facility registration numbers or importer registration number issued under the RFG regulations, the total volume of gasoline (RFG and conventional gasoline) produced at the refinery (or refineries, if aggregated prior to 2006) or imported by the importer during the averaging period, and the annual average sulfur content of the gasoline produced or imported. Small refiners who have EPA-approved individual baselines also be required to include the sulfur standards applicable to the refinery.

F. Other Relevant Federal Rules Which May Duplicate, Overlap, or Conflict with the Proposed Rule

The Tier 2 emission standards and gasoline sulfur control regulations that we are proposing are similar in many respects to existing regulations; in some cases, these regulations are replacing earlier requirements with more stringent requirements for refiners and vehicle manufacturers. However, the Panel is not aware of any area where the new regulations would duplicate, overlap, or conflict with the existing federal, state, or local regulations.

G. Regulatory Alternatives

The Panel considered a wide range of options and regulatory alternatives for providing small businesses with flexibility in complying with potential Tier 2 vehicle emission and gasoline sulfur standards. As a part of the process, the Panel requested and received comment on several early ideas for compliance flexibility that were suggested by the SERs and Panel members. Taking into consideration the comments received on these ideas as well as additional business and technical information gathered about the affected small entities, the Panel recommended that we solicit comment on several of them. As described below, the Panel recommended some of these concepts individually and, in the case of small refiners, recommended a comprehensive option that incorporates several ideas. The Panel took considerable time in addressing the concerns of the small refiners, who indicated their belief that their businesses may have to close if relief is not considered for their industry. Taken together, the Panel believed that these options would provide meaningful relief to small businesses in each of the industry sectors potentially affected by a Tier 2/gasoline sulfur control program while protecting the environmental goals of the program.

1. Small Refiners

The Panel recommended that small refiners be provided a four- to six-year period during which less stringent gasoline sulfur requirements would apply. Each refinery's gasoline sulfur limit would be based on its individual average sulfur level as reported in its most recent batch report (submitted under the reformulated gasoline program, e.g., for 1997) available at the time of the proposed rule. This four- to six-year period of relief would begin at the time that final standards become effective for the refining industry as a whole. Following this period of relief, small refiners would be required to meet the industry-wide standard, although temporary hardship relief would be available on a case-by-case basis. The Panel believed that the additional time that this approach would provide would 1) allow larger refiners to demonstrate new sulfur-reduction technologies, 2) permit the costs of advanced technology units to drop as the volume of their sales increases, 3) free-up industry engineering and construction resources, and 4) provide additional time for small refiners to raise capital for infrastructure changes.

Although during the Panel process we had not yet decided on an approach for a proposed sulfur control program, several small refiner options were discussed which made assumptions about the program that might be in place. Among the program designs that we were considering during the Panel process, the "worst case" scenario for small refiners was a national, year-round sulfur requirement of 30 ppm on average with an 80 ppm per-gallon cap beginning in 2004. The following discussion of the specific small refiner relief provisions assumed the existence of the "worst case" scenario and a scenario where the gasoline sulfur standards would be higher than 30 and 80 ppm. The Panel emphasized that we had not yet made decisions regarding the level and scope of sulfur controls that we were intending to propose.

a. Interim Sulfur Standards

In the Panel's recommended approach, small refiners covered by this special provision would be assigned interim sulfur standards based on their individual refinery gasoline sulfur levels today, according to Table VIII-4 below.

Table VIII-4. Federal Gasoline Sulfur Program with Sulfur Standards of 30 ppm on Average and an 80 ppm Per-Gallon Cap

Average Refinery Sulfur Level (ppm)	*Interim Sulfur Standards (average/cap, ppm) **
0 to 30	30/80
31 to 80	80 (Cap only)
81 to 200	Average: Maintain current average level Cap: Factor of 2.0 above the average
201 and above	Average: One-half current average level, 200 ppm minimum and 300 ppm maximum Cap: Factor of 1.5 above average level

* Note that if the federal program were to include a phase-in of sulfur standards, and if a refiner's current average sulfur level was below the phase-in level, the phase-in level would become the refiner's compliance level for the period of the phase-in.

More generally, if standards higher than 30/80 ppm were promulgated, the recommended interim standards for small refiners would be at the levels described in Table VIII-5, below.

Table VIII-5. Federal Gasoline Sulfur Program with Sulfur Standards Above 30 ppm on Average and an 80 ppm Per-Gallon Cap

Average Refinery Sulfur Level (ppm)	*Interim Sulfur Standards (average/cap, ppm)**
0-200	Average: Maintain federal standard or current average level Cap: Factor of 2 times the average
201-400	Average: 200 ppm or federal standard Cap: Factor of 1.5 times the average
401-600	Average: One-half of current average level Cap: Factor of 1.5 times the average
601 and above	300/450

* Note that if the federal program were to include a phase-in of sulfur standards, and if a refiner's current average sulfur level was below the phase-in level, the phase-in level would become the refiner's compliance level for the period of the phase-in.

i. *Duration of Interim Standards*

In addition to recommending that we propose a duration of four to six years during which the interim standards would apply, beginning from the effective date of the sulfur standard, the Panel also recommends that we specifically request comment on an alternative duration of 10 years.

b. Hardship Relief

i. Small Refiners

The Panel believed that it would be impossible to predict what the nature of the refining industry would be in the latter part of the next decade, when small refiners will need to comply with the final gasoline sulfur standard(s). Given this uncertainty, the Panel recommended that we propose provisions for small refiners that would allow us on a case-by-case basis to extend some form of relief from the standards for an additional period of time in cases of severe hardship. The Panel recommended that we design such a proposed hardship relief provision to include, at a minimum, the following characteristics:

- Criteria for granting of hardship relief that are sufficiently specific to help assure fairness among recipients of such relief while allowing a degree of flexibility for EPA to address special problems that may face individual refiners. Such criteria should be designed to require a demonstration that the refiner faces extreme economic consequences absent the relief and has exhausted other channels that could limit the consequences. EPA should consider including in proposed hardship relief provisions criteria such as, demonstrated inability on the part of the small refiner to develop sufficient capital, the temporary unavailability of new lower-cost sulfur removal technology, or the temporary unavailability of engineering or construction resources necessary for the design and installation of the new equipment.

- A provision for a small refiner to propose an appropriate time period for this additional relief. The Panel believes that the refiner should be expected to carefully document the need for a specific period of additional relief. The Panel also believes that such a period should be a minimum of two years so that the refiner can demonstrate a degree of stability into the future when seeking capital or credit.

The Panel was hopeful that the time provided by the interim standards for small refiners (perhaps added to any time provided by a phase-in of the industry-wide program) would allow for industry technology prove-out and cost reductions and for individual refiner planning such that hardship relief would be seldom or never needed. The Panel was also satisfied that current OMS management is committed to providing hardship relief if and when the need is demonstrated and we encourage future OMS management to be similarly open to small refiners facing dire economic impacts due to gasoline sulfur reduction standards.

Finally while the Panel recommended a refinery-based compliance option for small refiners, as discussed above, OMB noted that the Panel received comments from small refiners and small gasoline distributors supporting a geographically-limited sulfur program proposed by API and NPRA. In light of these comments, OMB recommended that we evaluate the API/NPRA proposal.

ii. Small Marketers of Gasoline

The Panel believed that adding gasoline sulfur to the fuel parameters already being sampled and tested by gasoline marketers will likely result in little, if any, additional burden. The gasoline marketer SERs that commented to the Panel did not address this issue. The Panel did not recommend any special provisions for gasoline marketers. (These parties raised concerns about indirect effects of a sulfur control program on marketers, especially if some refiners go out of business and reduce the number of gasoline suppliers. However, the focus of the RFA and SBREFA is on direct effects of a potential rule on small entities, which in this case do not appear to be problematic.)

2. Small Certifiers of Covered Vehicles

The Panel recommended that EPA solicit comment on several ideas suggested by small companies that certify LDVs, LDTs, and HDGVs, as discussed further below. However, several other concerns that these businesses raised to the Panel do not appear to be affected by potential new Tier 2 emission standards but rather involve existing regulations. While the Panel did not believe that these “non-Tier 2" issues would be appropriately addressed in a Tier 2 rulemaking, the Panel encouraged EPA to meet with small certifiers designated as ICIs to discuss those issues.

The Panel recommended that EPA solicit comment on the following potential regulatory options:

1) For small certifiers that convert imported vehicles to U.S. standards or that convert vehicles to operate on alternative fuels, provide a delay in required compliance of two years after Tier 2 standards apply to the model (engine family) involved.

2) If the Tier 2 program involves a phase-in of standards, allow small certifiers to comply at the end of such a phase-in.

3) If the Tier 2 program does not involve a phase-in of standards, delay compliance for small certifiers until 2007 (or three years after the program begins industry-wide).

4) Establish a credit program as a part of the Tier 2 program, and provide incentives for large manufacturers to make credits available to small certifiers. In addition, develop a

program to provide credits to small certifiers for taking older vehicles off the road (scrappage).

5) Design a case-by-case hardship relief provision that would delay required compliance for small certifiers that demonstrate that they would face a severe economic impact from meeting the Tier 2 standards.

Chapter VIII References:

1. Report of the Small Business Advocacy Panel on Tier 2 Light-Duty Vehicle and Light-Duty Truck Emission Standards, Heavy-Duty Gasoline Engine Standards, and Gasoline Sulfur Standards, October 1998.