



Economic Impact Analysis of the Miscellaneous  
Metal Parts and Products Surface Coating  
NESHAP: Final Report

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Economic Impact Analysis of the Miscellaneous Metal Parts and Products Surface Coating  
NESHAP

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# **ECONOMIC IMPACT AND SMALL BUSINESS ANALYSIS: MISCELLANEOUS METAL PARTS AND PRODUCTS SURFACE COATING**

## **1 INTRODUCTION**

Under Section 112(d) of the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) is developing a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for the Miscellaneous Metal Parts and Products (Surface Coating) source category (MMPP). The MMPP encompasses all industries that coat metal parts and products, but are not subject to other surface coating regulations. This final rule is expected to be promulgated in late August of 2003. The MMPP produces emissions of hazardous air pollutants (HAP) through the process of painting or otherwise coating metal surfaces. The Innovative Strategies and Economics Group (ISEG) has developed this economic impact analysis (EIA) to support the evaluation of impacts associated with regulatory options considered for this NESHAP. This EIA is part of compliance with Section 317 of the CAA.

### **1.1 Scope and Purpose**

This report evaluates the economic impacts of pollution control requirements on coating operations at facilities included in the MMPP source category. These requirements are designed to reduce emissions of HAP into the atmosphere. The CAA's purpose is to protect and enhance the quality of the nation's air resources (Section 101(b)). Section 112 of the Clean Air Act Amendments of 1990 establishes the authority to set national emission standards for hazardous air pollutants. The emissions of HAP from this source category originates from the coating and painting of the miscellaneous metal parts and products.

To reduce emissions of HAP, the EPA establishes NESHAP based on maximum achievable control technology (MACT). For existing sources, the MACT floor is the average emissions limitation achieved by the best performing 12 percent of sources (if there are 30 or more sources in the category or subcategory). The MACT can be more stringent than the floor, considering costs, non-air quality health and environmental impacts, and energy requirements. The estimated costs for individual plants to comply with the MACT standards are inputs into the economic impact analysis presented in this report.

## **2 ECONOMIC IMPACTS**

The MACT standards require facilities involved in the surface coating of miscellaneous metal parts and products to reduce the emissions of HAP from their surface coating operations to meet the levels specified by the NESHAP. The costs of meeting the MACT standards will vary across facilities depending upon their physical characteristics and current usage of coatings and solvents. These regulatory costs will have financial implications for the affected entities, and broader implications as these effects are transmitted through market relationships to other producers and consumers. These potential economic impacts are the subject of this section.

Inputs to the economic analysis include:

- Identification of industry segments with potentially affected facilities.
- Baseline characterization of facilities with miscellaneous metal parts and products coating operations and the companies that own these potentially affected facilities.
- Compliance cost estimates for facilities (through model plants) to meet the MACT floor standards.

The EPA has estimated the national total annual compliance costs (including monitoring, recordkeeping, and reporting) for existing sources to be \$47.3 million (1997 dollars).

### **2.1 Industry Segments**

The Miscellaneous Metal Parts and Products (MMPP) source category includes thousands of small, medium, and large facilities that apply coatings to a metal substrate to produce a wide range of parts and products. Coatings applied to the metal surfaces provide a protective, decorative, or functional film including protection from wear and corrosion. . The coatings possess varying characteristics which make them suitable for different applications. In general, this source category is broad and includes all those metal parts and products that are not covered by another coating source category, including original equipment manufacturers (OEM) and refurbishment shops.

Households, businesses, and institutions purchase and use these miscellaneous metal parts and products. The MMPP Surface Coating source category covers a wide variety of industry segments; no single description could cover all of these different industry sectors. For the purpose of this analysis, the industry segments that have been individually identified are listed below:

- Aerospace Ground Support Equipment
- Agricultural and Construction Machinery
- Aluminum Extrusion
- Automobile Parts
- Contract Coating Facilities
- Heavy-Duty Trucks and Buses
- Magnet Wire
- Metal Shipping Containers
- Metal Pipe and Foundry
- Rail Transportation
- Recreational Vehicles
- Rubber-to-Metal Bonded Part Manufacturing
- Structural Steel

This list should not be considered as exhaustive, and industries that may be subject to the rule developed for this source category may not be listed here. Each of the industry segments listed above is described in greater detail below:

**Aerospace Ground Support Equipment.** More than 12,000 parts or equipment types can be considered ground support equipment (GSE) in the aerospace industry. GSE is classified by the function of the equipment and by the items the equipment is used to support. GSE is used for auxiliary purposes, testing and checkout, handling of other equipment and cargo, mechanical site testing, packaging and transport, servicing, and other miscellaneous purposes.

**Agricultural and Construction Machinery.** The Agricultural and Construction Machinery Industry is covered by the 1997 North American Industry Classification System (NAICS) code series 3331 (Agricultural, Construction, and Mining Machinery Manufacturing) and series 33392 (Material Handling Equipment Manufacturing). The Agricultural and Construction Machinery Industry excludes corrals, stalls, and holding gates which are covered by NAICS code 332323 (Ornamental and Architectural Metal Work Manufacturing) and are categorized within the Structural Metal Industry. Railway truck maintenance equipment, which is covered by NAICS code 33651 (Railroad Rolling Stock Manufacturing) and are categorized in the Rail Transportation Industry. Hand-held clippers for shearing or grooming animals, covered by SIC 3523, are also excluded from the Agricultural and Construction Machinery Industry. A list of the NAICS codes that describe this industry and corresponding SIC codes is provided below.

- |        |  |
|--------|--|
| 333111 | Farm Machinery and Equipment Manufacturing<br>[includes SIC 3523 (Farm Machinery and Equipment), except corrals, stalls, and holding gates; farm conveyors and farm elevators, stackers and bale throwers; and hand hair clippers for animal use.] |
| 333112 | Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing<br>[includes SIC 3524 (Lawn and Garden Tractors and Home Lawn and Garden Equipment), except nonpowered lawnmowers]  |

- 33312 Construction Machinery Manufacturing  
[includes SIC 3531 (Construction Machinery and Equipment), except railway truck maintenance equipment; and winches, aerial work platforms and automotive wrecker hoists.]
- 333131 Mining Machinery and Equipment Manufacturing  
[includes SIC 3532 (Mining Machinery and Equipment, Except Oil and Gas Field Machinery and Equipment)]
- 333132 Oil and Gas Field Machinery and Equipment Manufacturing  
[includes SIC 3533 (Oil and Gas Field Machinery Equipment)]
- 333921 Elevator and Moving Stairway Manufacturing  
[includes SIC 3534 (Elevator and Moving Stairways)]
- 333922 Conveyor and Conveying Equipment Manufacturing  
[includes SIC 3535 (Conveyors and Conveying Equipment); and farm conveyors and farm elevators, stackers and bale throwers from SIC 3523 (Farm Machinery and Equipment)]
- 333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing  
[includes SIC 3536 (Overhead Traveling Cranes, Hoists, and Monorail Systems); and winches, aerial work platforms, and automotive wrecker hoists from SIC 3531 (Construction Machinery and Equipment)]
- 333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing  
[includes SIC 3537 (Industrial Trucks, Tractors, Trailers, and Stackers), except metal pallets, and metal air cargo containers]

**Aluminum Extrusion.** The Aluminum Extrusion Industry is covered by the NAICS code 331316 (Aluminum Extruded Product Manufacturing). The Aluminum Extrusion Industry is grouped with establishments primarily engaged in extruding aluminum and aluminum-based alloy basic shapes, such as rod and bar, pipe and tube, and tube blooms, including establishments producing tube by drawing. Aluminum extrusion manufacturers produce a wide array of products for several market sectors. The major market categories serviced by aluminum extruders and included in the MMPP source category are building and construction, transportation, and consumer durables. The building and construction market category consists of doors, windows and shutters, mobile homes, curtain walls, bridge rails and decks, street and highway construction, architectural shapes, patio and pool enclosures, light and flag poles, louvers and vents, and conduits. Included in the transportation category are aircrafts, trailers and semitrailers, passenger cars, trucks and buses, travel trailers, and recreational vehicles. The consumer durables market covers products such as refrigerators and freezers, major appliances, furniture, boats, outboard motors, sports and athletic equipment, and toys. Other major market categories serviced by the aluminum extrusion industry include electrical goods, machinery and equipment, distributors and jobbers, and exports. Most aluminum extruders produce products for multiple market sectors.

**Automobile Parts.** The Automobile Parts Industry is covered by the NAICS codes 336211 (Motor Vehicle Body Manufacturing) and the NAICS code series 3363 (Motor Vehicle Parts

Manufacturing). The Automobile Parts Industry includes establishments primarily engaged in manufacturing motor vehicle parts and accessories, but not engaged in manufacturing complete motor vehicles or passenger car bodies. NAICS code 336211 includes dump truck lifting mechanisms and fifth wheels. A list of the NAICS codes in series 3363 and corresponding SIC codes (except SIC 3714) that are relevant to the MMPP source category is provided below.

- 336311 Carburetor, Piston, Piston Rings, and Valve Manufacturing  
[includes SIC 3592 (Carburetor, Pistons, Piston Rings, and Valve Manuf.)]
- 336312 Gasoline Engine and Engine Parts Manufacturing
- 336321 Vehicular Lighting Equipment  
[includes SIC 3647 (Vehicular Lighting Equipment)]
- 336322 Other Motor Vehicle Electrical and Electronic Equipment Manufacturing  
[includes SIC 3694 (Electrical Equipment for Internal Combustion Engines)]
- 33633 Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
- 33634 Motor Vehicle Brake System Manufacturing
- 33635 Motor Vehicle Transmission and Power Train Parts Manufacturing
- 33636 Motor Vehicle Seating and Interior Trim Manufacturing  
[incl. metal motor vehicle seat frames SIC 3499 (Fabricated Metal Products, nec)]
- 33637 Motor Vehicle Stamping, Metal  
[includes SIC 3465 (Automotive Stampings)]
- 336391 Motor Vehicle Air-Conditioning Manufacturing  
[includes motor vehicle air-conditioning from SIC 3585 (Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment)]
- 336399 All Other Motor Vehicle Parts Manufacturing  
[includes luggage and utility racks from SIC 3429 (Hardware, Not Elsewhere Classified); stationary engine radiators from SIC 3519 (Internal Combustion Engines, Not Elsewhere Classified); gasoline, oil, and intake filters for internal combustion engines from SIC 3599 (Industrial and Commercial Machinery and Equipment, Not Elsewhere Classified); and trailer hitches from SIC 3799 (Transportation Equipment, Not Elsewhere Classified)]

**Contract Coating Facilities.** Contract coating facilities, or “job shops”, may be described as facilities that perform surface coating operations for a variety of industries on a contract basis. These facilities may specialize in coating products for one specific industry; or may coat several products for several different industries. Job shops may be covered by several NAICS codes including NAICS code 332812 (Metal Coating, Engraving (except Jewelry and Silverware) and Allied Services to Manufacturers). Included are establishments primarily engaged in performing enameling, lacquering, and varnishing services of metal products for the trade. Also included in this industry are establishments which perform these types of activities on their own account on purchased metals or formed products.



**Heavy-Duty Trucks and Buses.** The Heavy-Duty Trucks and Buses Industry is covered by the NAICS code 331316 (Motor Vehicle Body Manufacturing). The Heavy-Duty Truck and Buses Industry is grouped with establishments primarily engaged in manufacturing large truck and bus bodies and cabs for sale separately or for assembly on purchased chassis, or in assembling large truck and bus bodies on purchased chassis. Also included in this industry sector are truck trailers which are covered by the NAICS code 336212 (Truck Trailer Manufacturing). The truck trailer industry is grouped with establishments primarily engaged in manufacturing truck trailers, truck trailer chassis for sale separately, detachable trailer bodies (cargo containers) for sale separately, and detachable trailer (cargo container) chassis, for sale separately.

**Magnet Wire.** The Magnet Wire Industry is covered by the NAICS codes 331319 (Other Aluminum Rolling and Drawing), 331421 (Copper Rolling, Drawing, and Extruding); 331422 (Copper Wire [except mechanical] Drawing), 33149 (Nonferrous Metals [except copper and aluminum] Rolling, Drawing, and Extruding), and 335929 (Other Communication and Energy Wire Manufacturing). The Magnet Wire Industry is grouped with establishments primarily engaged in drawing, drawing and insulating, and insulating wire and cable of nonferrous metals from purchased wire bars, rods, or wire and includes establishments primarily engaged in manufacturing insulated fiber optic cable. Magnet wire is produced predominantly in large facilities which both draw and insulate the wire and sell it for use in electrical and electronic products.

**Metal Shipping Containers.** Metal shipping containers are classified by the NAICS code 332439 (Other Metal Container Manufacturing). The Metal Shipping Containers Industry consists of establishments primarily engaged in manufacturing metal shipping barrels, drums, kegs, and pails, and includes the following products:

- Containers, shipping: barrels, kegs, drums, packages - liquid tight (metal)
- Drums, shipping: metal
- Milk (fluid) shipping containers, metal
- Pails, shipping: metal - except tinned

This industry also includes the reconditioning of shipping containers which is classified by the NAICS code 81131 (Commercial and Industry Machinery and Equipment {except Automotive and Electronic} Repair and Maintenance).

**Pipe and Foundry.** The Pipe and Foundry Industry is covered by the NAICS code 33121 (Iron and Steel Pipe and Tube Manufacturing from Purchased Steel), and the NAICS code series 3315 (Foundries). This industry segment includes establishments primarily engaged in the production of welded or seamless steel pipe and tubes and heavy riveted steel pipe from purchased materials. Also included are establishments primarily engaged in manufacturing iron and steel castings and those establishments primarily engaged in manufacturing castings and die-castings of aluminum, brass, bronze, and other nonferrous metals and alloys. A list of the NAICS codes used to describe this industry and corresponding SIC codes is provided below.

- 33121 Iron and Steel Pipe and Tube Manufacturing from Purchased Steel  
[includes SIC 3317 (Steel Pipe and Tubes)]
- 331511 Iron Foundries  
[includes SIC 3321 (Gray and Ductile Iron Foundries) and 3322 (Malleable Iron Foundries)]
- 331512 Steel Investment Foundries  
[includes SIC 3324 (Steel Investment Foundries)]
- 331513 Steel Foundries (except Investment)  
[includes SIC 3325 (Steel Foundries, Not Elsewhere Classified)]
- 331521 Aluminum Die-Casting Foundries  
[includes SIC 3363 (Aluminum Die-Castings)]
- 331522 Nonferrous (except Aluminum) Die-Casting Foundries  
[includes SIC 3364 (Nonferrous Dies-Castings, except Aluminum)]
- 331524 Aluminum Foundries (except Die-Casting)  
[includes SIC 3365 (Aluminum Foundries)]
- 331525 Copper Foundries (except Die-Casting)  
[includes SIC 3366 (Copper Foundries)]
- 331528 Other Nonferrous Foundries (except Die-Casting)  
[includes SIC 3369 (Nonferrous Foundries, Except Aluminum and Copper)]

**Rail Transportation.** The Rail Transportation Industry is covered by the NAICS code 33651 (Railroad Rolling Stock Manufacturing). The Rail Transportation Industry includes establishments primarily engaged in building and rebuilding locomotives (including frames and parts, not elsewhere classified) of any type or gauge; and railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service. Locomotive fuel lubricating pumps and cooling medium pumps are covered by NAICS code 333911 (Pump and Pumping Equipment Manufacturing). In accordance with NAICS code 33651, this industry sector also includes railway truck maintenance equipment, which is also covered by SIC code 3531 (Construction Machinery and Equipment).

**Recreational Vehicles.** The Recreational Vehicle Industry is covered by the NAICS codes 336213 (Motor Home Manufacturing) and 336214 (Travel Trailer and Camper Manufacturing). The industry includes establishments primarily engaged in manufacturing self-contained motor homes on purchased chassis. NAICS 336213 includes establishments primarily engaged in manufacturing travel trailers and campers for attachment to passenger cars or other vehicles, pickup coaches (campers) and caps (covers) for mounting on pickup trucks. NAICS code 336214 also includes automobile, boat, utility, and light truck trailers, which are also covered by SIC code 3799 (Transportation Equipment, Not Elsewhere Classified).

**Rubber-to-Metal Bonded Part Manufacturing.** The Rubber-to-Metal Bonded Parts Manufacturing Industry is covered by the NAICS codes 326291 (Rubber Product Manufacturing for Mechanical Use) and 326299 (All Other Rubber Products Manufacturing). This industry includes establishments primarily engaged in manufacturing molded, extruded, and lathe-cut

mechanical rubber goods, generally for machinery and equipment. It also consists of establishments primarily engaged in manufacturing industrial rubber goods, rubberized fabrics, and vulcanized rubber clothing, and miscellaneous rubber specialties and sundries, not elsewhere classified. Many of the products manufactured in this industry are fabricated for use in the automotive industry.

**Structural Steel.** The Structural Steel Industry is covered by the NAICS codes 332114 (Custom Roll Forming), 332311 (Prefabricated Metal Building and Component Manufacturing), 332312 (Fabricated Structural Metal Manufacturing), 332321 (Metal Window and Door Manufacturing), and 332323 (Ornamental and Architectural Metal Work Manufacturing). This industry includes establishments primarily engaged in fabricating iron and steel or other metal for structural purposes, such as bridges, buildings, and sections for ships, boats, and barges as well as establishments primarily engaged in manufacturing ferrous and nonferrous metal doors, sash, window and door frames and screens, molding, and trim. It also includes establishments primarily engaged in manufacturing architectural and ornamental metal work, such as stairs and staircases, open steel flooring (grating), fire escapes, grilles, railings, and fences and gates, except those made from wire; establishments primarily engaged in manufacturing portable and other prefabricated metal buildings and parts and prefabricated exterior metal panels; establishments primarily engaged in manufacturing miscellaneous structural metal work, such as metal plaster bases, fabricated bar joists, and concrete reinforcing bars; and establishments primarily engaged in custom roll forming of metal. In accordance with NAICS code 332323, the structural metal industry also consists of metal corrals, stalls, and holding gates, which are covered by SIC code 3523 (Farm Machinery and Equipment).

## **2.2 Manufacturing Facilities**

Based on responses to the Section 114 letters, the EPA identified 321 facilities within this source category expected to be major sources subject to the MACT standard and its associated costs. Of this sample, a total of 294 facilities reported employment data with an average (median) of 824 (400) employees and a range from 2 to 13,287 employees. For the purpose of this analysis, these facilities represent the universe of potentially affected sources with the economic impacts estimated based on the regulatory costs applied to each using the “model plant” costing approach described in the Background Information Document (BID).

## **2.3 Companies**

The EPA identified 221 ultimate parent companies within this industry survey sample and obtained their sales and employment data from either their survey response or one of the following secondary sources:

1. Ward’s Business Directory
2. Hoover’s Company Profiles
3. Company Websites.

Appendix A provides a listing of these 221 companies identified from the industry survey that owned and operated the 321 facilities within this source category.

Annual sales and employment data were available for 147 of the companies (67 percent) and net income data were available for 76 of the companies (34 percent). The average (median) annual sales of companies reporting data were \$7.2 billion (\$567 million) with a range of \$5 million to \$161 billion. These figures include revenues from all operations. The average (median) employment for these companies was 26,956 employees (2,725 employees) with a range of 100 to 594,000. In addition, the average (median) annual net income of companies reporting data were \$775 million (\$64 million) with a range from -\$898 million to \$22.1 billion. The available data indicate 8 of the 76 companies reported negative net income, or profit losses, for 1997. These observed negative profit levels in the baseline are determined by factors outside the scope of this analysis. For example, Sunbeam Corporation has continued to experience negative net income and is reorganizing under Chapter 11 bankruptcy protection. In other situations, such as that for Union Pacific Corporation and Rockwell International, the company is no longer experiencing such losses.

Companies owning facilities within the MMPP source category can be grouped into small and large categories using Small Business Administration (SBA) general size standard definitions by NAICS codes. For most NAICS codes, the size standard is based on the number of employees but in some cases, the size standard is based on the annual sales of the company. There are a multitude of different NAICS codes across the ultimate parent companies owning these facilities. For these NAICS codes, the small business definition ranges are 500 to 1,500 employees and \$5 million in annual sales. Using these guidelines and available data, the EPA identified 29 small parent businesses, or 20 percent of all companies reporting sales and employment within this source category.

For 1997, the annual average (median) sales for the small companies was \$107 million (\$31 million) with a range of \$8 to \$950 million and the average (median) employment was 317 employees (300 employees) with a range of 100 to 780 employees. Net income data was not available for the 29 identified small businesses. For large companies, the annual average (median) sales was \$8.7 billion (\$871 million) with a range of \$50 million to \$161 billion and the average (median) employment was 32,393 employees (3,978 employees) with a range of 500 to 594,000. The annual average (median) net income for the large companies was \$492 million (\$11 million).

## **2.4 Economic Impact Results**

In conducting an economic impact analysis, the EPA typically models the responses by producers and markets to the imposition of the proposed regulation. The alternatives available to producers in response to the regulation and the context of these choices are important in determining the economic and financial impacts. Economic theory predicts that producers will

take actions to minimize their share of the regulatory costs. Producers decide whether to continue production and, if so, determine the optimal level consistent with market signals. These choices and market feedback allow them to pass costs forward to the consumers of their end-products or services and/or to pass costs backward to the suppliers of production inputs. However, given the wide diversity of products that will be affected by the regulation, the EPA focuses the economic impact analysis on the initial distribution of costs across existing facilities and companies owning these existing facilities. The small business impact of the regulation is analyzed in Section 3.

#### **2.4.1 Facility-Level Compliance Cost Burden**

Based on the “model plant” costing analysis described in the BID, Table 2-1 summarizes the compliance cost burden across the 321 facilities in the EPA database. These facilities account for roughly 20 percent of the total annual compliance costs of the regulation (i.e., \$9.3 million of \$47.3 million for all sources). As shown in Table 2-1, the annual average (median) cost per facility is \$32,758 (\$28,582) with a range from \$25,947 to \$140,487 per year. The estimates here indicate that the distribution of costs across facilities is skewed toward the lower impact levels, i.e., the median value is lower than the average value.

**Table 2-1. Summary of Compliance Cost Burden on Facilities in the Miscellaneous Metal Parts and Products Source Category: 1997**

<b>Item</b>	<b>All Facilities</b>
Total Facilities (#)	321
Total Costs (\$/yr)	\$9,303,212
Per Facility (\$/yr)	
Average	\$32,758
Median	\$28,582
Minimum	\$25,947
Maximum	\$140,487

#### **2.4.2 Company-Level Compliance Cost Burden**

Based on the industry survey responses, the EPA was able to identify 221 companies that owned 321 potentially affected facilities within this source category. Of this total, we were able to obtain sales data for 147 companies and net income data for 76 companies. For those companies with sales data, the economic impact analysis indicates that these regulatory costs average less than 0.1 percent of company sales with a range from zero to 1.25 percent. For those companies with positive net income data, these regulatory costs average 0.2 percent of company net income with a range from zero to 3.6 percent. For those companies reporting negative net

income for 1997, these regulatory costs average 0.001 percent of company sales with a range from zero to 0.004 percent of company sales. Thus, these costs would not exacerbate the baseline financial condition of any these companies.

### **2.4.3 Summary**

This analysis indicates that the compliance cost of this standard should not cause producers to cease or significantly alter their current operations. Hence, no firms or facilities are expected to be at risk of closures because of the standard.

## **3 SMALL BUSINESS IMPACTS**

This regulatory action will potentially affect the economic welfare of owners of miscellaneous metal parts coating facilities. The ownership of these facilities ultimately falls on private individuals who may be owner/operators that directly conduct the business of the firm (i.e., “mom and pop shops” or partnerships) or, more commonly, investors or stockholders that employ others to conduct the business of the firm on their behalf (i.e., privately-held or publicly-traded corporations). The individuals or agents that manage these facilities have the capacity to conduct business transactions and make business decisions that affect the facility. The legal and financial responsibility for compliance with a regulatory action ultimately rests with these agents; however, the owners must bear the financial consequences of the decisions. While environmental regulations can affect all businesses, small businesses may have special problems in complying with such regulations.

The Regulatory Flexibility Act (RFA) of 1980 requires that special consideration be given to small entities affected by federal regulation. The RFA was amended in 1996 by the Small Business Regulatory Enforcement Fairness Act (SBREFA) to strengthen the RFA’s analytical and procedural requirements. This section examines the MMPP source category and provides a screening analysis to determine whether this rule is likely to impose a significant impact on a substantial number of the small entities (SISNOSE) within this industry. The screening analysis employed here is a “sales test,” which computes the annualized compliance costs as a share of sales for each company.

The Small Business Administration (SBA) defines a small business in terms of the sales or employment of the owning entity. These thresholds vary by industry and are evaluated based on the industry classification (NAICS Code) of the affected facility. Responses to the industry survey indicated multiple industry classification codes with a small business definition ranging from 500 to 1,500 employees or less than \$5 million in annual sales. The EPA determined a company’s size standard based on the reported NAICS codes for these facilities. In cases where companies own facilities with multiple NAICS’s, the primary NAICS code and associated SBA definition was used. Based on EPA’s database, 29 companies were identified as small (20 percent of companies reporting sales and employment data) and the remaining 118 being large

(80 percent). The identification of companies as small or large is included in the company data listed in Appendix A.

Table 3-1 reports total annual compliance costs and summary statistics for the cost-to-sales ratios for small and large companies. Table 3-1 shows that the aggregate compliance costs incurred by small businesses represents 14 percent, or \$856,000, of the industry sample's total of \$5.95 million for those reporting sales and employment data. The annual compliance costs for small businesses range from zero to 1.17 percent of their sales. The mean (median) compliance cost-to-sales ratio is 0.17 (0.01) percent for the identified small businesses and 0.01 (0.01) percent for the large businesses. These results are expected to be "representative" of the distributional impacts across companies by size. After reviewing the range of costs (as compared to their sales) expected to be borne by small businesses, the EPA has determined the costs are typically small and, thus, certifies that this action will not have a significant impact on a substantial number of small entities.

**Table 3-1. SBREFA Screening Analysis on Miscellaneous Metal Part and Products Sample by Company Size: 1997**

	Small	Large	All Companies
Total Number of Companies	29	118	147
Total Annual Compliance Costs (\$10 <sup>3</sup> /yr)	\$856	\$5,095	\$5,951
Average TAC per company (\$10 <sup>3</sup> /yr)	\$29.5	\$43.2	\$40.5
Cost-to-Sales Ratios			
Average	0.17%	0.01%	0.04%
Median	0.01%	<0.01%	<0.01%
Minimum	0.00%	0.00%	0.00%
Maximum	1.17%	0.14%	1.17%

**Appendix A. Baseline Data for EPA Sampled Companies Operating Facilities With Miscellaneous Metal Parts and Products Coating Operations: 1997**

<b>Company Name</b>	<b>Sales (\$10<sup>6</sup>)</b>	<b>Employment (#)</b>	<b>Net Income (\$10<sup>6</sup>)</b>	<b>Small Business</b>
AB Volvo	\$26,276	79,820	\$1,066	No
AO Smith Corporation	\$918	9,700	\$45	No
United Industrial Corp.	\$221	1,900		No
ABB Ltd.	\$30,872	199,232	\$1,305	No
Accessory Controls and Equipment Corp.				
ACF Industries, Inc.	\$580	2,100		No
Advanced Technical Products, Inc.	\$165	1,568	\$6	No
Airxcel, Inc.				
Alcoa Inc.	\$15,340	103,500	\$853	No
Alliant Techsystems, Inc.	\$1,090	6,110	\$51	No
Allied Hastings Barrel & Drum Service				
Allied Signal, Inc.	\$15,128	70,400	\$1,331	No
Allied Tube and Conduit Corporation	\$170	1,200		No
Aluminum Shapes L.L.C.	\$100	900		No
Amana Refrigeration Inc	\$590	550		Yes
American Buildings Company	\$441	2,850	\$15	No
American Meter Company	\$100	800		No
American Railcar Industries				
American Safety Razor, Inc.	\$298	2,257	\$10	No
AMPCOR II, Inc.				
AMSTED Industries, Inc.	\$1,252	9,100		No
AMTROL, Inc.	\$202	1,875	-\$13	No
Anderson Greenwood and Co.				
Arkansas Steel Associates				
Arvin Industries, Inc.	\$2,499	14,963	\$78	No
ASMO Co.Ltd.				
AWH Corporation				
Behlen Mktg. Inc.	\$100	900		No
Berenfield Containers, Inc.	\$21	200		Yes
Blue Bird Corporation	\$626	2,877	\$22	No
Bodor Corporation (dba Explorer Van Company)				
Briggs & Stratton Corporation	\$1,502	7,615	\$106	No
Broan Manufacturing Company, Inc.	\$280	1,000		No
Brock Enterprises, Inc.	\$130	1,600		No
Brunner Engineering & Mfg.	\$12	200		Yes
Burk Woods, Alabama Tank, Inc.				
Burnham Corporation	\$144			Yes
Caldwell Tanks, Inc.				
California Steel Industries				
Canam Steel Corporation				
Carolina Steel Steel Corp	\$150	800		No
Carriage, Inc.				
Case Corporation	\$6,149	17,700	\$64	No



**Appendix A. Baseline Data for EPA Sampled Companies Operating Facilities With Miscellaneous Metal Parts and Products Coating Operations: 1997 (Continued)**

<b>Company Name</b>	<b>Sales (\$10<sup>6</sup>)</b>	<b>Employment (#)</b>	<b>Net Income (\$10<sup>6</sup>)</b>	<b>Small Business</b>
Caterpillar, Inc.	\$20,977	65,824	\$1,513	No
CCX Industries, Inc.				
Central Can Company				
CF&I Steel, L.P.				
Chicago Blower Corporation				
Chief Industries, Inc.	\$83	1,200		No
CHS Acquisition Corp.	\$53	300		Yes
Cives Corporation	\$130	900		No
Coffeyville Re-Con, Inc.				
Columbian Steel Tank Company	\$10	100		Yes
Commercial Metals Company	\$2,368	7,350	\$43	No
Container Recyclers Inc.				
Cooper Industries, Inc.	\$3,651	28,100	\$423	No
Cooper Tire and Rubber Company	\$1,876	10,766	\$127	No
Copperweld Corporation	\$436	2,500		No
CP Louisiana, Inc.				
Crane Company	\$2,269	12,500	\$138	No
Crown Cork & Seal Co. Inc.	\$8,300	38,459	\$105	No
CSX Corporation	\$9,898	46,147	\$537	No
Cummins Engine Company, Inc.	\$6,266	28,300	-\$21	No
DaimlerChrysler	\$154,615	441,500	\$5,656	No
Deere & Company	\$13,626	37,000	\$1,021	No
Delong's, Inc.	\$15	100		Yes
Delphi Automotive Systems	\$28,479	197,560	-\$93	No
DENSO International America				
Duchossois Industries, Inc.				
EBSCO Industries	\$1,000	4,000		No
Emerson Electric Co.	\$13,447	111,800	\$1,229	No
Equimeter, Inc.				
Escalade, Inc.	\$91	725	\$6	No
ESCO Corporation				
Essex Group, Inc.	\$1,204	4,100		No
Esterline Technologies	\$353	3,100		No
Eugene Welding Company	\$5			
Evans Industries, Inc.	\$67	500		Yes
Farr Company	\$122	1,285	\$7	No
FKI Industries, Inc.				
Ford Motor Company	\$144,416	345,175	\$22,071	No
Franklin Electric Company, Inc.	\$273	2,321	\$24	No
Galveston-Houston Company		710		No
Hargrove Manufacturing				
Gehl Company	\$262	1,127	\$15	No
GATX Corporation	\$1,763	6,000	\$132	No

**Appendix A. Baseline Data for EPA Sampled Companies Operating Facilities With Miscellaneous Metal Parts and Products Coating Operations: 1997 (Continued)**

<b>Company Name</b>	<b>Sales (\$10<sup>6</sup>)</b>	<b>Employment (#)</b>	<b>Net Income (\$10<sup>6</sup>)</b>	<b>Small Business</b>
General Electric Company	\$99,820	293,000	\$9,296	No
General Motors Corporation	\$161,315	594,000	\$2,956	No
Geneva Steel	\$721	1,625	-\$19	No
Glaval Corporation	\$300	600		No
Gooder-Henrichsen Company, Inc.	\$14	100		Yes
Gower Corporation	\$18			Yes
Great Dane Limited Partnership	\$1,000	4,700		No
Greenbrier Companies	\$540	2,865	\$20	No
Harley-Davidson, Inc.	\$2,064	6,200	\$214	No
Hart and Cooley, Inc.	\$130	1,700		No
Hay and Forage Industries	\$110	900		No
Hexcel Corporation	\$1,089	6,875	\$50	No
High Industries, Inc.				
Honda Motor Co., Ltd.	\$52,372	112,200	\$2,564	No
Hoover Group	\$125	500		Yes
ICO Worldwide, Inc.	\$281	1,605	\$6	No
Indiana Heat Transfer	\$8	100		Yes
Reading Body Works, Inc.	\$32	300		Yes
ITT Industries, Inc.	\$4,493	33,000	\$1,533	No
J & L Structural, Inc.				
J. T. Walker Industries				
J.B. Jensen Sr.				
Jackson Products, Inc.		700		No
Jayco, Inc.	\$250	1,200		No
Johnstown America Industries, Inc.	\$560	3,300		No
Kawada Industries USA	\$68	500		Yes
Ken-Koat, Incorporated				
Keymark Corporation				
Keystone Consolidated Industries, Inc.	\$370	2,100	\$4	No
Kline Iron & Steel Company, Inc.				
Konstant Products, Inc.				
Leed Himmel Company				
LeTourneau, Inc.				
Loxscreen Company, Inc.	\$65	700		No
LTV Corp.	\$4,273	14,800	-\$27	No
L & B Protective Coatings Inc.				
Renault S.A.	\$43,430	138,320	\$1,561	No
MagneTek, Inc.	\$663	14,900	\$39	No
Newmar Corp	\$175	600		Yes
Marion Steel Company	\$100	400		Yes
Mark III Industries	\$950	780		Yes
Century Tube Corporation				
McCook Metals LLC				

**Appendix A. Baseline Data for EPA Sampled Companies Operating Facilities With Miscellaneous Metal Parts and Products Coating Operations: 1997 (Continued)**

<b>Company Name</b>	<b>Sales (\$10<sup>6</sup>)</b>	<b>Employment (#)</b>	<b>Net Income (\$10<sup>6</sup>)</b>	<b>Small Business</b>
McDermott International, Inc.	\$3,150	20,350	\$153	No
McElroy Manufacturing, Inc.	\$14	200		Yes
Metal Finishing Company, Inc.				
Modine Manufacturing Company	\$1,111	8,700	\$74	No
Monaco Coach Corporation	\$595	3,043	\$23	No
Morgan Chemical Products, Inc.				
M-TEK, Inc.				
Mueller Co.	\$200	2,300		No
Munster Steel Company, Inc.	\$8	100		Yes
New Columbia Joist	\$30	200		Yes
National RV Holding	\$81	400		Yes
Navistar International Transportation Corp.	\$7,830	17,558	\$299	No
NCI Building Systems, L.P.	\$675	3,700	\$37	No
Nesco Container Corp	\$20	100		Yes
New Venture Gear, Inc.	\$1,033	4,000		No
NIBCO Inc.	\$500	3,500		No
Nortek Inc.	\$1,738	9,640	\$35	No
Northrop Grumman Corporation	\$8,902	49,600	\$194	No
Northwestern Steel and Wire Company	\$596	2,000	\$42	No
Nucor Corporation	\$4,151	7,200	\$264	No
Nylint Corporation	\$20	200		Yes
Oce' USA Incorporated				
Olympic Steel, Inc.	\$560	1,000		No
Oregon Steel Mills, Inc.	\$893	2,426	\$12	No
Owen Industries, Inc.				
PACCAR, Inc.	\$7,895	23,000	\$417	No
Pee Dee Tank Company, Inc.				
Peerless Products Inc.				
Phelps Dodge Corporation	\$3,063	13,924	\$191	No
Pitt-Des Moines Inc.	\$567	2,479	\$20	No
Plasti-Line, Inc.	\$103	1,200		No
Premoor, Inc.				
Quoin, Inc.				
R. C. Tway Company, Inc.				
R. V. Hopkins				
Rawson-Koeing, Inc.	\$21	300		Yes
Ready Metal Manufacturing Company				
Regal Ware, Inc.	\$190	1,800		No
Replogle Globes, Inc.	\$16	200		Yes
Rexnord Corporation	\$533	4,800		No
Roanoke Electric Steel Corp.	\$295	1,215	\$19	No
Robert Bosch GmbH	\$30,200	188,017	\$510	No
General Steel Drum Corporation				

**Appendix A. Baseline Data for EPA Sampled Companies Operating Facilities With Miscellaneous Metal Parts and Products Coating Operations: 1997 (Continued)**

<b>Company Name</b>	<b>Sales (\$10<sup>6</sup>)</b>	<b>Employment (#)</b>	<b>Net Income (\$10<sup>6</sup>)</b>	<b>Small Business</b>
Bigbee Steel and Tank				
Rockwell Collins, Inc.				
Rockwell International	\$6,752	41,000	-\$427	No
Rogar Hebert				
Schuff Steel Company	\$67	500		No
Sequa Corporation	\$1,802	11,050	\$64	No
Sheffield Steel Corporation	\$163	673	\$2	No
Skyline Corporation	\$665	3,500	\$26	No
Sonoco Products Company	\$2,558	16,500	\$180	No
SST Truck Co.,LLC.				
Standard Spray				
Subaru-Isuzu Automotive, Inc.	\$420	2,200		No
Sunbeam Corporation, Inc.	\$1,837	14,196	-\$898	No
Supreme Industries	\$223	2,000	\$9	No
Tenneco Automotive	\$1,800	14,800		No
Texas Finishing Company				
Ducane Company	\$47	500		Yes
Vendo Company				
Therma-Tru Corporation				
Three Rivers Aluminum Company, Inc	\$50	800		No
Tomkins Industries, Inc.	\$1,400	14,000		No
Toro Company	\$931	3,300		No
Trailmobile Corporation	\$400	1,700		No
Tredegar Industries	\$700	3,400	\$69	No
Trinity Industries	\$2,927	17,450	\$185	No
Truth Hardware Corporation	\$77	800		No
Tuscaloosa Steel Corporation	\$275	400		Yes
Tyco International	\$12,311	87,000	\$1,175	No
U. S. Industries, Inc.				
USX Corporation	\$27,877	43,513	\$647	No
Union City Body Company L.P.				
Union Pacific Corporation	\$10,553	65,000	-\$633	No
Union Tank Car Company	\$580	2,600		No
United Structures of America, Inc.				
Van Leer Containers, Inc.				
VP Buildings, Inc.				
W & W Steel Company				
Wabash National Corporation	\$1,292	5,302	\$23	No
Waterloo Industries, Inc	\$130	1,200		No
Wells Aluminum Corporation				Yes
West Union Corporation				
Windsor Metal Specialties, Inc				
Winnebago Industries, Inc.	\$525	3,010	\$24	No

**Appendix A. Baseline Data for EPA Sampled Companies Operating Facilities With Miscellaneous Metal Parts and Products Coating Operations: 1997 (Continued)**

<b>Company Name</b>	<b>Sales (\$10<sup>6</sup>)</b>	<b>Employment (#)</b>	<b>Net Income (\$10<sup>6</sup>)</b>	<b>Small Business</b>
Worthington Industries, Inc.	\$1,478	10,000		No
Wyman-Gordon Forgings, Inc.	\$849	3,955	\$37	No
Yale Security Inc.	\$200	2,500		No
YKK Corporation	\$1,711	9,506	\$78	No
Kidde-Fenwal	\$65	400		Yes
Chemtrom Fire Systems				

Note: Baseline data provided in this table reflect reported financial condition as of 1997 and do not account for any changes associated with imposition of the MACT standards.

## TECHNICAL REPORT DATA

*(Please read Instructions on reverse before completing)*

1. REPORT NO. EPA-452/R-03-018	2.	3. RECIPIENTS ACCESSION NO.
4. TITLE AND SUBTITLE Economic Impact Analysis of the Miscellaneous Metal Parts and Products Surface Coating NESHAP: Final Report	5. REPORT DATE August 2003	
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15. SUPPLEMENTARY NOTES		
16. ABSTRACT This report evaluates the economic impacts of the final Miscellaneous Metal Parts and Products Surface Coating NESHAP. The economic impacts of the rule are estimated by comparing the expected costs of compliance to the sales of affected firms. The report also provides the screening analysis for small business impacts.		
17. KEY WORDS AND DOCUMENT ANALYSIS		
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