

from existing sources by 7,682 tpy, a reduction of 43 percent.

The final NESHAP will result in small increases in other air pollution emissions from combustion devices that will be installed in the next 5 years to comply with today's final rule. These increases result both from the combustion device directly, and from the electrical generating plants used to generate the electricity necessary to operate the add-on controls and associated air handling equipment. These emissions are estimated to be 2.3 tpy of sulfur oxides (SO_x), 3.0 tpy of nitrogen oxides (NO_x), 4.9 tpy of carbon monoxide (CO), and 0.1 tpy of particulate matter (PM) emissions.

C. What Are the Water Quality Impacts?

We estimate that the final NESHAP will have no adverse water quality impacts. We do not expect anyone to comply by using add-on control devices or process modifications that would generate wastewater.

D. What Are the Solid and Hazardous Waste Impacts?

We estimate that the final NESHAP will decrease the amount of solid waste generated by the reinforced plastic composites industry by approximately 2,650 tpy. The decrease in solid waste is directly related to switching to nonatomized resin application equipment (*i.e.*, flowcoaters and resin rollers). Switching to nonatomized resin application equipment results in a decrease in overspray because of a greater transfer efficiency of resin to the part being manufactured. A decrease in resin overspray consequently reduces the amount of waste from disposable floor coverings, cured resin waste, and personal protective equipment (PPE) for workers. Disposable floor coverings are replaced on a periodic basis to prevent resin buildup on the floor. We estimate that solid waste generation of floor coverings will decrease by approximately 620 tpy, and that cured resin solid waste will decrease by approximately 2,030 tpy.

We project that the decreased overspray from nonatomized resin application equipment will result in a decreased usage of PPE, which also consequently reduces the amount of solid waste. When using nonatomized resin application equipment, workers typically wear less PPE than when using atomized spray guns because of the reduced presence of resin aerosols and lower styrene levels in the workplace. Because we did not have information on the many different types of PPE currently used, we did not estimate this decrease in solid waste.

Some facilities that switch from atomized to nonatomized spray guns may have a small increase of hazardous waste from the used nonatomized spray gun cleaning solvents. However, most facilities would not see an increase under the final rule, and the overall impact on the industry will be small relative to the solid waste reductions. Nearly all nonatomized spray guns require resin and catalyst to be mixed inside the gun (internal-mix) and must be flushed when work is stopped for more than a few minutes. External-mix spray guns do not need to be flushed because resin is mixed with catalyst outside the gun. Facilities that switch from external-mix to nonatomized spray guns will use more solvent. Solvent usage should not change at facilities switching from internal-mix spray guns to nonatomized spray guns. The most common flushing solvents are acetone and water-based emulsifiers. Only a couple of ounces of solvent are typically needed to flush the mixing chamber and nozzle of internal-mix spray guns.

We do not have adequate data to predict the potential solvent waste impact from switching to nonatomized spray guns. The magnitude of the impact depends on the type of gun currently used (internal- or external-mix), the frequency of flushing, and the type of solvent used. However, because of the small amount of solvent used, and since most is allowed to evaporate, we believe the overall solvent waste increase will be small compared to the solid waste reductions.

E. What Are the Energy Impacts?

Energy impacts result from the final NESHAP because some facilities will be required to install add-on controls to meet certain HAP emissions limits or percent reduction requirements. We anticipate that these controls will be concentrator/oxidizer systems or thermal oxidizers. These controls increase energy requirements in two ways. First, all reinforced plastic composites facilities must ventilate work areas to maintain worker styrene exposure within acceptable limits. The ventilation systems typically exhaust air directly to the atmosphere. When an add-on control device is added to control HAP emissions, it creates an additional pressure drop for the ventilation system which, in turn, means that more electricity is required to operate system fans and to operate the control device itself. Second, fuel (usually natural gas) is required to supplement the oxidizer combustion process.

We determined that the overall energy demand for operations in the Reinforced

Plastic Composites Production source category could increase by 10 million standard cubic feet per year of natural gas, and 0.6 million kilowatt hours of electricity per year as a result of the final rule. We determined this net increase based on the additional energy demand for control devices installed to meet the final standards. No information for comparison is available on the baseline energy consumption for this source category.

F. What Are the Cost Impacts?

We have estimated the industrywide capital costs for HAP emissions control equipment, including equipment such as open container covers, resin bath enclosures, capture systems, and control devices as \$12.6 million for the 435 existing sources and \$22.8 million for the 84 new sources. The capital costs include the costs to purchase and install the control equipment.

We have estimated the industrywide annual costs of the final rule are \$21.5 million per year for the 435 existing sources and \$7.7 million for the 84 new sources. Annual costs include fixed annual costs, such as reporting, recordkeeping and capital amortization, and variable annual costs such as natural gas. The estimated average cost of the final rule is \$2,800 per ton of HAP emissions reductions for existing sources and \$5,560 per ton of HAP emissions reductions for new sources.

G. What Are the Economic Impacts?

We conducted a detailed economic impact analysis to determine the market- and industry-level impacts associated with the final rule. We expect the aggregate price increase for reinforced plastic composites would be only 0.7 percent, or \$0.03 per pound, as a result of the final rule. We project that directly affected producers would reduce total production by 1.7 percent, while producers not directly affected would increase their production by 0.7 percent. Markets for reinforced plastic composites used in corrosion-resistant products are expected to be more heavily impacted with price increases of roughly 1.6 percent and reductions in directly affected domestic production of almost 5 percent. The reason for more significant impacts in the corrosion-resistant market is that facilities in this market have higher average per-unit variable compliance costs. Corrosion-resistant product variable compliance costs are \$0.13 per pound of product versus an industry average of \$0.06 per pound.

In terms of industry impacts, we analyzed impacts for captive producers and merchant producers. Captive