

data collected for Ohio facilities did not provide financial data to perform facility financial impact analyses, as was done in the national analysis. EPA therefore used data from the national analysis to estimate the percentage of facilities that would close in the baseline and post-compliance. EPA assumed the ratio of facilities that close in the national analysis with the same discharge status, subcategory, and flow category would be comparable to closures for facilities in Ohio. For example, two percent of direct Oily Waste facilities discharging less than one MGY close in the baseline in the national data set.

EPA developed engineering estimates of compliance costs for each Ohio facility and annualized costs using a seven percent discount rate over a 15-year period. As in the national social cost analysis, EPA included compliance costs for facilities that close due to the rule and costs for facilities that continue to operate subject to the final regulation. Including costs for regulatory closures in effect calculates the social costs of compliance that would be incurred if every facility continued to operate post-regulation. In fact, some facilities may find it more economical to close, and calculating costs as if all facilities continue operating provides an upper bound estimate of social costs.

EPA used the same methods as used in the national social cost analysis to estimate other components of social costs for the Ohio case study. Section VIII of this preamble and Chapter 11 of the EEBA describe the methods used to estimate government administrative costs and the social costs of unemployment.

Table IX-8 shows the total estimated social costs of the final rule for Ohio facilities.

TABLE IX-8.—ANNUAL SOCIAL COSTS FOR OHIO FACILITIES: PROPOSED OPTION

[Thousands 2001\$, costs annualized at 7%]

Component of social costs	Selected option
Resource value of compliance costs	\$62.23
Government administrative costs	\$0.00
Social cost of unemployment	\$0.00
Total social cost	\$62.23

4. Comparison of Monetized Benefits and Costs for Ohio Case Study

The Ohio case study shows substantial net positive benefits associated with the MP&M regulation. EPA estimates the social cost in Ohio of

the final regulation to be \$62,232 annually (2001\$). The sum total of benefits that can be valued in dollar terms is \$930,408 annually (2001\$). Comparing the midpoint estimate of social costs (\$62,232) with the midpoint estimate of monetizable benefits (\$930,408) results in a net social benefit of \$868,178. This represents a partial cost-benefit comparison because not all of the benefits resulting from the regulation can be valued in dollar terms (e.g., changes in systemic health risk).

For the reasons previously discussed, EPA judges that the analytic approach and detailed data used for the Ohio case study provide a more robust and accurate benefits estimate than the data and approach used for the national-level analysis.

X. Non-Water Quality Environmental Impacts

Sections 304(b) and 306 of the Act require EPA to consider non-water quality environmental impacts (including energy requirements) associated with effluent limitations guidelines and standards. In accordance with these requirements, EPA has considered the potential impact of today's final regulation on air emissions, solid waste generation, and energy consumption.

While it is difficult to balance environmental impacts across all media and energy use, the Agency has determined that the benefits associated with compliance with the limitations and standards justify the multi-media impacts identified in this section (see section IX for a discussion on the environmental benefits associated with this regulation). For additional information on non-water quality impacts associated with today's regulation, see section 13 of the TDD.

A. Air Pollution

MP&M facilities generate wastewater that contain organic compounds. These organic compounds may be volatile organic compounds (VOCs), which contribute to the formation of ambient ozone, or hazardous air pollutants (HAPs) listed in section 112(b) of the Clean Air Act (CAA). These wastewaters often pass through a series of collection and treatment units that are open to the atmosphere and allow wastewater containing organic compounds to contact ambient air. Atmospheric exposure of the organic-containing wastewaters may result in the release of VOCs or organic HAPs from the wastewater.

The use of halogenated hazardous air pollutant solvent (methylene chloride, perchloroethylene, trichloroethylene,

1,1,1 trichloroethane, carbon tetrachloride and chloroform) for cleaning in the MP&M industry can create hazardous air pollutant emissions. The Agency has concluded that this regulation will not affect the use of halogenated hazardous air pollutant solvent in the MP&M industry. This regulation neither requires nor discourages the use of aqueous cleaners in lieu of halogenated hazardous air pollutant solvent.

Because today's final rule would not allow any less stringent control of VOCs or organic HAPs than is currently in place at MP&M facilities, EPA does not predict any net increase in air emissions from volatilization of organic pollutants due to today's action. As such, EPA expects no adverse air impacts are expected to occur as a result of today's regulation.

The Agency notes that it is developing National Emission Standards for Hazardous Air Pollutants (NESHAPs) under section 112 of the CAA to address air emissions of HAPs. Current and upcoming NESHAPs that may potentially affect HAP emitting activities at MP&M facilities considered during the development of this rule include:

- Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks;
- Halogenated Solvent Cleaning;
- Aerospace Manufacturing;
- Shipbuilding and Ship Repair (Surface Coating);
- Large Appliances (Surface Coating);
- Metal Furniture (Surface Coating);
- Automobile and Light-Duty Truck Manufacturing (Surface Coating); and
- Miscellaneous Metal Parts and Products (Surface Coating).

Finally, EPA notes that the energy requirements discussed in this section may result in increased emissions of combustion byproducts associated with energy production. Given the relatively small projected increases in energy use, EPA does not anticipate that this effect would be significant.

B. Solid Waste

As shown in Table X-1, EPA anticipates that waste oil generation will increase as a result of today's rule. The estimated increase of waste oil generation as a result of today's rule reflects better removal of oil and grease by the selected technology than is currently achieved.