Maintenance staff needs to know proper procedures to avoid liability.

A company can use tens of thousands of disposable industrial wipers and rental shop towels annually to maintain top performance in a wide variety of precision manufacturing equipment and other maintenance operations. Industry sales in the U. S. for industrial wipers alone are more than $1 billion per year.

With this widespread use, and with new rules from the Environmental Protection Agency (EPA), proper laundering and disposal practices need to be an important component of the maintenance technology manager's toolbox, and knowledge of proper handling techniques is essential to avoiding environmental liabilities.

The EPA's new rule spells out the environmental responsibilities for waste generators (i.e., companies that use wipers and towels). This rule places both rental shop towels and disposable industrial wipers under the same federal authority. Previously, rental shop towels were under local and state regulations, but not federal. Only disposable industrial wipers were under federal control.

Knowing the details of this new rule will help engineers and managers successfully integrate industrial wipers and rental shop towels into their environmental strategies and avoid liability for violations.

Who is responsible for environmental problems?

Liability for environmental violations rests on the waste generator—the company using the industrial wiper or shop towel—not the industrial laundry or the waste hauler. The common misperception among many companies has been that as long as they used rental shop towels and sent them to an industrial laundry, they were free of liability. This is not the case; companies have responsibility even after the towels and wipers have left their property.

But the good news is that compliance to the new rule will be relatively simple, as long as users follow a few procedures. See accompanying section " EPA Rule at a Glance. "

Companies that generate less than 250 pounds of solvents per month are exempt from the

rule. Companies with more than 250 pounds per month should note that wipers and rental towels follow different procedures depending on how the wipers are to be treated (i.e., municipal landfill, incineration, industrial laundry, etc.).

Under the new rule, pre-treatment practices are required when necessary to remove excess liquid on wipers and towels. Practices such as centrifuging, microwave extraction, gravity, or mechanical wringing are recommended. This allows maintenance crews to reduce the residue to EPA-approved limits before sending wipers and towels out the door.

Wipers and towels with grease and oil can be treated as regular solid waste if they meet the “no drip” rule. This literally means that if the item is wrung out, it does not drip. No special handling is needed before laundering or disposal.

Another key is storage and transportation. Traditionally, rental towels and wipers were often stored in open bins. They now must be stored and transported in closed containers. The EPA found that open bins of solvent-soiled wipers and towels, in particular, were one of the chief causes of indoor air pollution at plants. In addition, EPA notes that rental towels and industrial wipers stored in open containers also led to fires and other safety hazards. These issues of air quality and safety have now also become major concerns for Occupational Safety and Health Administration (OSHA) regulators.

The maintenance equation

Quality maintenance and performance reliability must always be given priority when selecting tools and supplies. In the past, managers responsible for plant equipment maintenance tended toward rental shop towels because shop towels represented a “no hassle” approach. The industrial laundry, managers assumed, would assume liability once the towels left the plant. In addition, since rental towels were laundered and reused, managers saw this as environmentally preferable to disposables, which raised questions about resource conservation.

However, as the EPA began to look more closely into environmental issues of rental towel laundering, it found that when rental shop towels from industrial plants were laundered, the solvent and oil-based wastewater put burdens on municipal water systems, requiring extra resources for clean up. According to the EPA, in some cases the polluted wastewater overflowed into drinking water.

Points to consider before selection

When plant maintenance and reliability engineers consider whether to use a shop towel or disposable wiper, the new regulations should be used as a guide for determining the benefits of each option.

Performance and cost are obviously key issues. Today when managers must do more with less, the cost of each option becomes very important. What is the cost to buy vs cost to rent? For rentals, are there environmental or disposal fees for laundry sludge? Are there lost or replacement fees? Are there fuel or energy surcharges? For disposable industrial wipers, are there cost/performance benefits to buying different task-specific sizes and textures, rather than renting one-size, one-texture shop towels?

With safety issues, if rental towels are used, what is the track record of the laundry? Has it delivered towels that have contained leftover residue of solvents or metal chards that did not wash out from a previous use? Since laundries contract to deliver a specified number of towels each week to each customer, but not the same towels back to the same customer, residue can be a problem. If disposable wipers are used, will the supplier guarantee consistent quality and competitive pricing?

Finally, which method, rental shop towels or disposable wipers, represents an acceptable environmental position for the company? Rental towels are reusable, but generate polluted wastewater. Disposable industrial wipers are sent to the landfill; but according to an EPA study prepared by Lockheed Martin Environmental Services, wipers contribute less solid waste by weight in the landfill than rental towels.

The new EPA rule is expected to appear in the Federal Register within the next 60 days, and should go into effect shortly thereafter.

With the new EPA regulations, this is an important time to re-examine maintenance policies. Doing so now will ensure that plant equipment can be maintained with the proper product that meets corporate environmental objectives. **MT**

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EPA Rule at a Glance

1. Disposal industrial wipers were covered under EPA regulations prior to this new rule, while rental (laundered) towels were not. Instead, rental towels were governed by a wide variety of state and local laws. Impact: Bringing both rental towels and disposal wipers under one rule replaces a hodgepodge of regulations, making it easier for companies with multi-state locations to comply with regulations.

2. End-users (the operating facilities, not laundries or third-party haulers) are responsible for pollution discharges. Impact: Operating facilities need to closely monitor laundering or disposal of wipers and towels.

3. Companies that dispose of less than 250 pounds of hazardous waste per month are exempt from the following regulations. Companies that generate more than 250 pounds per month must adhere to these regulations. Impact: Plant operations should now include pre-treatment technology.

a. If waste is sent for disposal through a licensed combustion waste facility or to a nonlandfill facility, then the wipers must have “no free liquids.” In other words, although the wipers may have more than 5 grams of solvent on them, the wipers must be wrung to eliminate dripping liquids. Hand wringing is not permitted. Pre-treatment such as centrifuging, microwave extraction, or gravity draining are acceptable methods.

b. If waste is sent to a municipal or nonhazardous waste landfill, the wipers must be in “dry” condition, meaning that they contain less than 5 grams of solvent and are free of dripping liquids. Substances on the EPA list of “11 solvents of concern” may not be sent to these landfills under any conditions.

c. The EPA “11 solvents of concern” are: 2-nitropropane, nitrobenzene, MEK, methylene chloride, pyridine, benzene, cresols (o,m,p), carbon tetrachloride, chlorobenzene, tetrachloroethylene, and trichloroethylene. Nonhazardous substitutes are now available for some of these chemicals. Facility managers should contact their industry association for more information.

d. If a rental shop towel program is used, then free liquid must be removed before being sent to the laundry.

4. Wipers with solvents containing more than 5 grams of solvent must be stored in closed

containers while at plant sites, rather than left in open bins where these pollutants can escape into the air. Impact: Indoor air quality at plants should improve.

5. Wipers with solvents must be transported in closed containers. Impact: To avoid environmental fines, managers must ensure that contractors comply.

6. Wipers and towels with grease and oil can be treated as regular solid waste if they meet the “no drip” rule. This literally means that if the item is wrung out, it does not drip. No special handling is needed before laundering or disposal. Impact: Treatment is simplified.

7. Recovery and recycling of spent solvents is encouraged, and most can be reused for industrial cleaning. Impact: Expect to save money on cleaning supplies.

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