

ENVIRONMENTAL ASPECT OF BUSINESS GROWTH ECONOMIC CONSIDERATIONS FOR WASTE MANAGEMENT STRATEGIES

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One of the easiest ways to save operating costs is by managing waste streams properly from the start. This is true of everything from office wastes to process wastes. Regardless of whether a business growth venture or project involves a new facility or improvements to an existing operation, consideration of waste generation and its appropriate management should be included early on in the planning stages. Perhaps the easiest way to do this is to consider the facility or process as a box.

- What materials will enter the box?
- Will they be stored prior to use and do they have a shelf life?
- How will they be used?
- Will the materials be entirely consumed by facility operations?
- Will use of the material involve air emissions, result in wastewater discharge, and/or become waste material? Will the materials be exposed to storm water?
- If input materials ultimately become a waste, will it be characterized as industrial waste or hazardous waste and what will be the final deposition (e.g., landfill, recycle, other)?

With strategic planning, facilities typically have the opportunity to mitigate the quantity and type of waste materials that may be generated, potentially saving the company significant costs in waste management, collection and disposal, regulatory compliance costs; and can reduce or eliminate potential liability. The following three (3) examples present simple programmatic changes in waste management that can significantly effect a company's bottom line.

SOLVENT CONTAMINATED WIPES

EPA has conditionally excluded from RCRA requirements solvent-contaminated wipes after use or cleaning up a spill that are cleaned and reused or are disposed. Historically this waste stream required management as a hazardous waste under RCRA, which drove onerous handling and management practices and disposal costs to deal with such a common waste stream. The new exclusion applies only to wipes contaminated with solvents characterized by select waste classes:

- F001-F005;
- Solvents residing on the P or U Lists); or
- Solvents that exhibit only the Ignitibility hazardous waste characteristic.

Requirements include that the wipes: exhibit no free liquids, are kept in properly labeled closed containers, are accumulated for no more than 180 days, and are sent to appropriate "handlers." If the wipes are to be cleaned and reused they must be sent to launderers/dry cleaners that have discharge permits from a publicly owned treatment plant or state water authority. If the wipes are to be disposed, they may be considered a non-hazardous waste if not contaminated with trichloroethylene (TCE) and the waste rags/wipes must be disposed by one (1) of the following disposal options:

- Landfill with a minimum Subtitle D waste permit,
- Waste combustor with an air permit, or
- Hazardous waste combustor, boiler, or industrial furnace with air and waste permits

The generator does not have any reporting requirements, but must maintain records demonstrating compliance, including identifying the location where solvent-impacted rags are sent for laundering or disposal. By introducing laundering vs. disposal, or implementing a strategic selection of solvents which meet this exclusion, this change in the RCRA regulation presents opportunity to eliminate significant disposal costs.

UNIVERSAL WASTE

Essentially every facility including commercial and professional buildings, whether existing or new, generates Universal Waste. Universal Wastes are a subset of hazardous waste categorically provided with reduced regulatory requirements to encourage recycling. These wastes include some batteries (i.e., Ni-Cd, small sealed lead acid), lamps containing mercury or lead, mercury containing equipment, and some pesticides. These wastes may be accumulated for up to one year prior to off-site shipment for recycling. During accumulation, the waste must be kept in a closed, labeled container noting the date such accumulation originated.

Proper handling, management and storage of these materials can help avoid unnecessary disposal costs most often associated with untrained handling of these wastes. Once a Universal Waste is no longer intact (i.e., damaged or broken), they are subject to full hazardous waste requirements and the associated storage, management and disposal costs. Typically employees who handle Universal Waste are not experienced environmental staff, and thus not familiar with routinely handling of other types of hazardous materials.

Therefore, initial training in Universal Waste handling practices and procedures, particularly in responding to situations involving broken bulbs or damaged/leaking batteries, should be provided early for new employees and annually thereafter during safety meetings as a refresher for all employees. A marginal investment in annual training, regular auditing of Universal Waste management and storage practices, and appropriate disposal/recycling operations can help mitigate the potential remedial costs (including cleanup costs and regulatory fines) associated with inappropriate disposal of Universal Wastes in regular solid waste dumpsters.

CHANGE IN THE DEFINITION OF SOLID WASTE – EPA TIGHTENS RECYCLING REGULATIONS

Citing a number of enforcement cases involving management of certain hazardous secondary materials by third party recyclers, EPA amended the definition of “solid waste” on January 13, 2015. The amendment became effective July 13, 2015. In order to ensure these materials are legitimately recycled, EPA revised the definition of “legitimacy” to clarify that recycled secondary materials must meet all four (4) of the following factors.

1. The materials provide a useful contribution to the recycling process or product.
2. The process produces a valuable intermediate or product.
3. The material is managed as a valuable commodity.
4. The recycled product must be comparable to legitimate intermediates or products.

Generators and hazardous materials recyclers must document that their materials/processes meet these four (4) factors. In addition, the amendments increased requirements for the “generator controlled exclusion” to include notifications, recordkeeping, and emergency preparedness requirements.

A newer “verified recycler exclusion” replaced the previous “generator transfer exclusion”. A verified recycler must either obtain a RCRA permit or a solid waste variance from the regulatory authority (EPA/state) to verify proper management of these materials. Both of these mechanisms require enhanced safety measures, financial assurance, and public participation in the permitting/variance process.

EPA also established a conditional “remanufacturing exclusion” for eighteen higher-value spent solvents transferred from one manufacturer to another manufacturer for processing (‘remanufacturing’) the spent solvent “back into the commercial grade solvent.” Eligible solvents include toluene, xylenes, ethylbenzene, methyl isobutyl ketone, ethanol, n-butyl alcohol, and methanol. The solvents must originate from a specific manufacturing process and must be “remanufactured” for certain types of chemical functions.

New uses for secondary materials are developing every year. Regular evaluation of a facility’s designated industry, associated industries and the facility’s materials can help identify innovative and strategic alternatives to solid waste disposal, saving costs and potentially generating new revenue.