Scrap Metal Merchants Sector

EPA Region 2 Pollution Prevention Insights Bulletin

The U.S. Environmental Protection Agency is working to reduce releases of toxics from small businesses during extreme weather events (e.g., flooding and storm surge events). This bulletin highlights pollution prevention opportunities for increasing the success, competitiveness, and overall resilience of your business. Pollution prevention strategies, which include the use of environmentally friendly products and practices, can reduce the risk of improper chemical management, limit liability, save money and increase worker and customer satisfaction.

Did You Know?

Recycling iron and steel scrap comes from many sources including steel cans and other steel products, appliances, automobiles, and construction materials.[1]

Metal scrap recycling is a large complex industry requiring many processing techniques. These techniques pose a range of health and safety concerns for employees and the environment. Metal scrap recycling operations present a variety of hazards, including health and safety hazards associated with chemical exposures and materials processing operations and equipment use.[2] Scrap metal can even become contaminated with radioactive material; posing additional worker health risks.[1]

It's also important to avoid the release of liquid hazardous materials (such as oils and lead-acid battery contents) into soils, groundwater, and surface waters, and the release of air conditioning refrigerants such as chlorofluorocarbons into the atmosphere.

[1] EPA Radiation Protection – Contaminated Scrap Metal: http://www.epa.gov/radiation

[2] OSHA – Metal Scrap Recycling Guidance: https://www.osha.gov/Publications/OSHA3348-metal-scrap-recycling.pdf

Additional Information:

EPA P2 – What You Can Do About Pollution Prevention – Business Resources: http://www.epa.gov/p2/what-you-can-do-about-pollution-prevention-business-resources

Washington State – Department of Labor and Industries: Exit http://www.lni.wa.gov/Safety/Research/files/lead_scrap.pdf

Tauranga City Council, Tauranga, New Zealand: Exit http://econtent.tauranga.govt.nz/data/water/files/pollution_brochures/automotive_dismantlers_bpg.pdf

Vermont Department of Environmental Conservation: Exit http://www.anr.state.vt.us/Dec/ead/sbcap/salvage/PDF/bmpguide.pdf

Success Stories

Omnisource Recycling Facility – Toledo, Ohio

The City of Toledo started its Salvage & Stewardship program in 2011 with a grant from the U.S. EPA Great Lakes Restoration Initiative. Omnisource was able to join this program and demonstrated environmental improvements.

Omnisource implemented best management practices (BMPs) throughout its facility in an attempt to protect local water quality. These BMPs included weekly and monthly inspections, annual environmental and safety training for employees, and installing clearly visible and properly placed labels. Several oil-water separators were installed, as well, in areas prone to spills and leaks, and near employee wash sites; once separated, the oil is then cleaned and recycled. Omnisource also made infrastructure and maintenance improvements – such as investments in paved surfaces and street sweepers – and installed spill response kits throughout its facility to keep minor accidents from escalating to major problems.

CREDITS

Thanks to City of Toledo Exit and to Omnisource: Exit (http://www.tmacog.org/BP_12/Jan_12/01_2012_Salvage_stewardship.htm) and (http://tmacog.org/Scrapyard/Omnisource_Fact_Sheet_Final.pdf)

Brown's Auto Salvage – Bomoseen, Vermont

Brown's Auto Salvage is an example of a business making attempts to enhance best management practices that can lead to better business efficiency. By improving the environmental work practices at the company Brown's Auto Salvage has become more efficient. Before making changes the entire salvage process from dismantling to locating used parts for customers took them an average of 25 - 30 work-hours per vehicle each year. Now, with these environmental work practice improvements, this process takes an average of just eight work-hours.

CREDITS

Thanks to Brown's Auto Salvage: Exit (http://www.brownsautosalvage.com/epa.php)

Exit = https://www.epa.gov/home/exit-epa

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Spills and Prevention

- Implement safety precautions to prevent tipping of appliances which could cause spills of toxic compounds.
- Drain all fluids from appliances on an impervious surface such as a concrete pad.
- Employ oil-water separators throughout the site and especially near places where spills are more likely to occur.
- Install paved surfaces to prevent contaminates from infiltrating the soil.
- Place a layer of cardboard between batteries to absorb liquids that have leaked.

Parts Cleaning and Sorting

- A HEPA filter vacuum cleaner can be used to clean brakes and clutch assemblies instead of solvents or water.
- Remove caked-on grease or oil with a spatula before cleaning with solvents.
- Consider switching to aqueous-based cleaning.
- If solvent on shop rags is kept to a minimum then these can be sent to certified laundry services instead of being disposed.
- Clean parts in multiple stages: first, employ a dedicated solvent washing unit then follow up with a clean rinse to reduce solvent use.
- Remove the mercury switches before a vehicle is crushed so that mercury is not released into the surroundings.
- Switches should not be placed in aluminum or tin containers because mercury can combine with these materials and seep through.
- Remove batteries from vehicles as soon as possible so that it does not get crushed along with the vehicle.

Reuse and Recycling

- Test batteries to determine if they can be reused or sold.
- Lead battery cable ends can be left on batteries for recycling.

Invitation

You are invited to share your own success stories and additional best management practices with the EPA Pollution Prevention and Climate Change Section for consideration in our next bulletin!

Tell us what problem or challenge your small business faced, what steps you took to overcome it and how or why it resulted in a successful outcome. Provide details like the ones you see in this bulletin that explain how your actions resulted in cost savings, operating efficiency improvements, or other measurable successes.

Your story could be featured in our next bulletin to serve as an example for other small businesses.

For more information and to find out how YOU can submit your success story, send an e-mail to us at: Region2_PollutionPrevention@epa.gov, visit our P2 site at: http://www.epa.gov/p2 or contact Region 2 EPA P2 at: http://www.epa.gov/p2/forms/contact-us-about-pollution-prevention

Special thanks to:
The Department of Ecology; State of Washington – NPDES Guide for Vehicle and Metal Recyclers: Exit (https://fortress.wa.gov/ecy/publications/publications/94146.pdf) for the BMPs listed above.

USEPA Region 2,
Serving New Jersey, New York, Puerto Rico, U.S. Virgin Islands.

EPA United States Environmental Protection Agency

POLLUTION PREVENTION