



## FESHM 8022: WASTE MINIMIZATION AND POLLUTION PREVENTION AWARENESS PROGRAM

### Revision History

<b>Author</b>	<b>Description of Change</b>	<b>Revision Date</b>
Katie Kosirog	<ul style="list-style-type: none"><li>• Deleted attached list of regulatory drivers and replaced it with link to DOE's website due to the frequent updating of regulations.</li><li>• Deleted most of Environmentally Preferred Purchasing paragraph and added a link to the new FESHM chapter 1100, Sustainable Acquisition Program.</li><li>• Updated list of recycled items.</li><li>• Minor editorial changes.</li></ul>	April 2011



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## 1.0 INTRODUCTION

Waste Minimization and Pollution Prevention (WM/P2) concepts will be embedded into all aspects of research and operations at Fermilab. A strong WM/P2 program is an integral part of the Laboratory's Environmental Management System. Fermilab's WM/P2 Program reflects Department of Energy, national and local WM/P2 goals and policies. It represents an ongoing effort to integrate WM/P2 with our research mission.

## 2.0 REGULATORY DRIVERS

Fermilab is required to have a Waste Minimization and Pollution Prevention Program. DOE's Office of Health, Safety, and Security's website (<http://www.hss.doe.gov/pp/resources.html>) describes the regulatory drivers that require the program.

## 3.0 PROGRAM DESCRIPTION

Fermilab's WM/P2 program is anchored by three tenets commonly associated with pollution prevention objectives. They are Reduce, Reuse and Recycle.

### Reduce

The most effective way to eliminate waste and reduce pollution is to avoid creating it. Source reduction prevents the generation of waste in the first place and thereby minimizes the environmental impact. Consider the total life cycle cost of materials, rather than just the initial cost. Ways to reduce include:

Choose products and materials that are less toxic or can easily be reused or recycled. (Also see Sustainable Acquisition Program below.)

Purchase durable long-lasting goods.

Use sustainable design and engineering practices to reduce the amounts of non-renewable raw materials required. Design and engineer systems for long life. Incorporate end-of-lifecycle recycling and reuse options into processes, products and systems.

### Reuse

Opportunities exist to make serviceable items that are no longer needed available to others who might find a renewed use. Fermilab has options to make items available to others for reuse including a chemical exchange system, an office furniture reuse program, a DOE complex wide materials exchange data base, a GSA (U.S. General Services Administration) excess system, and the Property Management Excess Center that is used daily for reuse throughout the Lab. The FESS Property Management Group is in charge of the lab's excess assets.



## Recycle

Items that cannot be reused should be recycled whenever possible. Recycling is the preferred option for materials that would otherwise be discarded. Recycling reduces the demand for raw materials and the associated environmental impacts. Goods made from recycled materials also typically require much less energy to produce compared to goods made from raw materials. Fermilab's recycling program includes an office desk-side program as well as several other programs run by various internal organizations. Information can be found on the ES&H website at <http://esh.fnal.gov/xms/Environment/Recycling-and-Waste>. Appendix A describes items commonly recycled at the lab.

Construction and demolition (C&D) waste can also be recycled. Typically 85% of the waste generated during construction and demolition projects occurring at the lab has the potential to be recycled. The sub-contract or other procurement documents should specifically request that C&D waste be sent to a recycler. The lab has C&D dumpsters around the site for routine C&D projects that create smaller volumes of waste.

## Sustainable Acquisition Program

Sustainable Acquisition (SA), formerly phrased Environmentally Preferred Purchasing or EPP, is the act of buying products that have a reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Fermilab's SA program is described in FESHM 1100, Sustainable Acquisition Program.

## 4.0 GOALS

The Environmental Protection Subcommittee sets reduction and improvement goals as part of the Lab's Environmental Management System (EMS). These goals reflect our desire to meet or exceed DOE's Pollution Prevention and Energy Efficiency Goals. The EMS, Environmental Management Program Form documents these goal commitments. D/S/Cs may set less formalized goals to capture WM/P2 activities unique to their respective organizations such as annual ES&H plans.

## 5.0 REPORTING

Fermilab must report annually our progress toward meeting our goals to DOE and EPA using DOE's Pollution Prevention Tracking and Reporting System and EPA's SARA Title III, Section 313 (TRI) report. D/S/Cs shall support these reporting requirements by documenting all of their waste reduction and recycling activities and reporting them to the ESH&Q Section Environmental Protection Group.

**6.0 APPENDIX A****Common Recycled Items at Fermilab**

<b><u>Recyclable Items</u></b>	<b>Recycling Method</b>
White/ mixed paper, newsprint, magazines, recyclable plastic bottles/ containers, aluminum cans, glass bottles	Point of use collection managed by Janitorial Service
Cardboard – boxes must be flattened and packing materials removed.	Point of use collection managed by Janitorial Service
Scrap metal (various)	Local scrap pick-up locations FESS Property Management Pickup
Computers and electronics	FESS Property Management Pickup
Batteries: <ol style="list-style-type: none"><li>1. Lead-acid, nickel-cadmium, silver oxide, mercury and nickel-metal hydride</li><li>2. Alkaline-multiple locations of pails in each D/S/C</li></ol>	<ol style="list-style-type: none"><li>1. Submit HCTT* Waste Pickup Request Form through your Waste Coordinator</li><li>2. D/S/C responsible for delivery to FESS Property Management Group</li></ol>
Fluorescent and high-intensity discharge lamps	Submit HCTT Waste Pickup Request Form through your Waste Coordinator
Used oils	Submit HCTT Waste Pickup Request Form through your Waste Coordinator
Wood & plastic pallets	FESS Property Management Pickup
Printer toner cartridges	Drop-off bin, Wilson Hall, ground floor
Construction/Demolition debris	To be included in fixed price construction/ demolition contract
Polystyrene #6 (hard, white Styrofoam)	Certain locations site wide; contact your D/S/C Environmental Officer
Plastic transparencies (remove any paper or sheet protectors)	AD: Drop-off in labeled bin in X-Gal Hi-bay
Mercury containing devices (thermometers, thermostats, switches)	Submit HCTT Waste Pickup Request Form through your Waste Coordinator

\* HCTT – Hazard Control Technology Team in ESH&Q Section