

Biology Complex Legacy Materials Disposition Initiative

Through up-front planning and commitment to safety, pollution prevention, and cost savings, the Legacy Materials Disposition Initiative (LMDI) consolidated and reused a significant amount of instruments, equipment, and supplies during the Biology Cleanout in buildings 9207A, 9210, and 9224 at the Y-12 National Security Complex (Y-12). Through LMDI personnel commitment and coordination, materials were reused/recycled. The facilities, which housed UT-Battelle staff and researchers, mainly consisted of research laboratories, personnel offices, work and general purpose areas, the legendary Mouse House laboratory, and storage areas. As shown in the before and after pictures, the LMDI truly “emptied out the space.”



Source reduction, reuse, and recycling techniques used by LMDI included segregating materials and wastes, reusing materials within UT-Battelle, returning materials to vendors, sending materials to UT-Battelle Property Sales, donating materials, and recycling.

Reused materials included 2 spill kit carts with supplies and 2 spill kit drums with supplies sent to the Chemical Management Center; 32 gas cylinders; 1 pallet of research grade glass sent to the Glass Shop; laboratory supplies (instruments, equipment, and HPLC needles); 10 cubic yards (yd³) of new light bulbs, electrical supplies, and wiring; and 4 pallets of janitorial supplies.

Returned materials to vendors included reverse osmosis water treatment unit and small deionized water unit saving 6 months of rental fees and 5 large dry ice boxes allowing deposit to be refunded.

Materials sent to Property Sales included 80 yd³ of plastic fluorescent light covers, 34 tractor-trailer loads of equipment and furniture, and 23 yd³ of new and used general office supplies.

Donated materials included 3,750 pounds (lb) of animal feed and bedding to the Knoxville Zoo; 75 thermometers, 10 research grade microscopes with accessories, and 6 pallets of research grade glass to schools; and 22,000 books and periodicals and 1,200 magazine holders and six magazine racks to Knoxville College.

Recycled materials included 100,000 lb of scrap metal, 300 lb of lead, 90 toner cartridges, 385 gallons of used oil, 80 yd³ of mixed paper, 64 yd³ of cardboard, 60 yd³ of wood, 91 pallets of mouse cages and plastic bottles, 11 pallets of computer equipment, and 1 large fork lift battery.

Through the comprehensive use of all of these methods, valuable alternatives were implemented that reduced waste, provided cost savings, and resulted in lower waste disposal costs. Generated wastes were further segregated and managed to maximize use of on-site landfills and to minimize the amount of waste sent to off-site facilities. In total, 2,400 cubic yards of material were recycled, reused, donated, or sold saving similar landfill space and \$140,000 in disposal costs and resulting in a savings of \$135,000 in acquisition and \$245,000 in resale cost.