

SAFETY POLICY / PROCEDURE

BLYTHEDALE CHILDREN'S HOSPITAL

Manual
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SUBJECT: HAZARDOUS AND REGULATED MEDICAL WASTE: MANAGEMENT OF		
EFFECTIVE DATE: February 1989	REVISED DATE: July 2020	SUPERCEDES: June 2017

INTRODUCTION

This document describes the procedures for storage, disposal, and minimization of hazardous wastes at Blythedale. The Environmental Protection Agency (EPA) regulates these activities as authorized by the Resource Conservation and Recovery Act (RCRA). The State of New York enforces the regulations through the New York Department of Environmental Protection (NYDEP). The Department of Transportation (DOT) regulates transportation of all hazardous waste.

WHAT DEFINES A HAZARDOUS WASTE?

The requirements of this program apply to hazardous chemical wastes, regulated medical waste, and certain categories of non-hazardous chemical waste.

A chemical waste may be considered hazardous due to a general characteristic or because it is specifically listed by name. The following systematic approach outlined below is a guide for use in deciding whether a chemical waste is hazardous.

Safety Data Sheet (SDS) – SDS sheets contain information on the physical and chemical properties of various hazardous chemicals, solutions and products. SDS sheets should be maintained by each department for a particular chemical product used by that department. SDS sheets can also be obtained directly from the manufacturer by accessing the CDC chemical link located under the “Hospital Links” section of the BCH intranet or by a Google search.

Characteristics of Hazardous Chemical Waste include:

- Ignitability
- Corrosivity
- Reactivity
- Toxicity

Regulated Medical Waste: RMW is a waste product that contains free flowing blood/body fluid. Also included in this category are SHARPS such as needles with attached syringes, all blades, used or broken blood tubes, vials, scissors etc.

Specifically Listed Waste – The EPA regulates approximately 500 chemicals as hazardous waste. Chemical wastes named on any of the following lists are hazardous:

- P-list = acutely hazardous
- U-list = toxic
- F-list = waste from nonspecific sources
- K-list = waste from specific sources

Mixed Waste Streams – This term refers to a hazardous chemical waste that also is considered to be radioactive. Blythedale does not have any mixed waste streams.

Non-hazardous Waste – In order to determine that a chemical waste is non-hazardous, the name of the pure chemical or the constituents of the chemical mixture must be known. If the pure chemical or the constituents of the mixture are determined to be non-hazardous, the material can be disposed down the drain if it is a liquid or deposited in the trash if it is a solid.

Blythedale's Waste Streams:

- Sewer disposable waste – These are liquid wastes, which include dilute acids and bases. Drain-disposing of non-hazardous liquid substances require that disposal immediately be followed by flushing the drain with copious amounts of water.

Non-ignitable (either pure chemicals or mixtures) liquids can be disposed of in drains.

Ethanol/water mixtures that are less than 10% alcohol are not ignitable. Therefore, this waste stream can be sewer-disposed as long as no other hazardous constituents are present.

Non-hazardous solid waste is never disposed of in the sewer regardless of the amount.

Hazardous chemical waste is never disposed of in the sewer.

- Trash Disposable Waste: Examples of non-hazardous *solid* wastes include biochemicals such as sugars, salts, minerals, and starches; dry water-based inks and paints, alkaline batteries.

Non-hazardous liquid waste is never placed in the trash.

Hazardous chemical waste of any type is never discarded in the trash in any amount.

- Regulated Medical Waste: RMW containers are currently available in soiled utility rooms on the patient units. They are red and have a printed Biohazard symbol. The containers are mounted on a transportable cart that includes a step-on feature to minimize handling of waste. Additional red containers are stored in the Biohazard Medical Waste Storage Room located near the Pharmacy.

Red RMW containers are Department of Transportation (DOT) approved and leak, tear and odor resistant. The containers must never be filled greater than 3/4 capacity, as per DOT

regulation and appropriately locked to prevent leakage. Nursing and Environmental Services personnel will monitor and ensure containers are changed prior to exceeding the 3/4 capacity and appropriately locked.

Chemo containers are currently available in soiled utility rooms on the patient units. They are yellow and have a printed Biohazard symbol. The containers are mounted on a transportable cart that includes a step-on feature to minimize handling of waste. Additional Chemo containers are stored in the Biohazard Medical Waste Storage Room located near the Pharmacy.

Pharmaceutical waste containers are currently available upon request by the Environmental Services department. They are purple top containers and have a printed Biohazard symbol. The containers are double-mounted on a transportable cart that includes a step-on feature to minimize handling of waste. Additional Pharmaceutical Waste containers are stored in the Biohazard Medical Waste Storage Room located near the Pharmacy.

RESPONSIBILITIES

- All hospital personnel who utilize hazardous materials as part of their job responsibilities receive training in appropriate handling methods and use of personal protective equipment (PPE).
- All hospital personnel receive Infection Control Bloodborne Pathogen training.
- Healthcare personnel wear appropriate PPE when in contact with blood/body fluid, mucous membranes or non-intact skin of all patients regardless of their diagnosis or infectious state. (Refer to Hospital Policy Manual: **Infection Control/Standard Precautions I - 2**)
- Adequate ventilation, fume hoods etc. is insured when certain hazardous chemicals are utilized and anti-neoplastic drugs are prepared. All personnel who handle these chemicals do so in accordance with the manufacturers' instructions and regulatory agency standards. Appropriate PPE including gowns, gloves and masks are worn when indicated.

WASTE MINIMIZATION

Environmental Services and Engineering staff conduct waste minimization activities. This refers to a reduction in toxicity and/or volume of hazardous waste. Waste reducing practices also help to control disposal costs. These practices may include:

Product Substitution: Using less hazardous or non-hazardous material.

- Use of nontoxic detergents and enzymatic cleaners in place of chromic acid and hydroxide/ethanol-based solutions.
- Use of preservatives that do not contain mercury and sodium azide.
- Use of water-based and low VOC paints in place of oil-based.

Waste Segregation: Keeping waste streams separated. Hazardous waste and Non-hazardous waste is not mixed.

Waste Recovery: Toner cartridges are collected and recycled.

Chemical Deactivation methods include:

Neutralization – the addition of chemical agents to the substance that eliminates the hazardous nature of the substance

Dilution – the addition of water or another liquid to the hazardous substance making it safe for disposal in the sewage system

Licensed chemical contractor – chemicals are packaged and removed for disposal or recycling by a licensed contractor. The chemicals are then manifested and the distribution process is documented by the contractor. The Hospital receives manifests from the contractor at the time the materials are picked up (generation point) and after the materials reach their destination (destination manifest).

Sound Management Practices:

- Require staff to purchase the *minimum* amount of hazardous chemicals that suffice for current use. (Disposal costs are usually greater than the purchase price)
- Store ignitable hazardous waste in an approved flammable storage cabinet.
- Require staff to label all containers properly in accordance with hazard communication requirements. (Unknown chemicals are more expensive to dispose)
- Ensure that employees receive the appropriate training

ACCUMULATION OF WASTE

- Hazardous waste is collected in a designated container that is in good condition. Any container that is not sound or begins to leak must be replaced with a suitable container and the material transferred. When transfer is necessary, employees must use appropriate PPE.
- The container must be compatible with the material it is holding. Waste is not placed in containers that previously contained incompatible waste. For example the following chemicals must be collected separately and never commingled:
 - Aqueous solutions: *e.g. diamino benzidine, ethidium bromide, heavy metals*
 - Corrosive: acids are separated from bases
 - Brominated compounds are accumulated in separate containers only.
 - Halogenated hydrocarbons. *e.g. chloroform, methylene chloride.*
 - Nonhalogenated compounds: *e.g. acetone, ether, hexane, toluene, xylene*
 - Nitrogenous compounds: *e.g. diisopropyl amine, triethylamine*
 - Oil: *e.g. motor oil, lubricating oil*
 - Sulfurous compounds: *e.g. dimethyl sulfate, dimethyl sulfoxide.*

- Label the waste container immediately with the words “hazardous waste” and identify the contents. List the chemical name and the approximate volume of each ingredient, including water.
 - Waste containers are kept closed unless pouring wastes into them.
 - Waste containers are stored at or near the point of generation. The storage area must be well ventilated. Hazardous chemical waste must be stored in approved storage cabinets and not on the floor. Storage cabinets must be appropriately labeled.
 - Containers of hazardous waste must be inspected weekly for leakage, deterioration, and damaged labels. Unacceptable conditions must be corrected immediately.
 - Waste containers in an accumulation area must not exceed 55 gallons for typical hazardous waste and 1 quart for acute hazardous wastes.
 - When the container is full, arrangements are made to remove it.

EMPTY CONTAINER DISPOSAL

Empty compressed gas cylinders are returned to the vendor. All other empty chemical containers may be disposed with ordinary trash if:

1. The container is completely empty and no liquid remains in the container, and
2. The waste *is not acutely hazardous*

If the chemical or any of the waste’s mixture’s constituents are not an acute hazardous waste:

- Remove or paint over all labels showing prior contents

If the contents were acutely hazardous:

- Triple rinse the container with a small amount of suitable diluent. Water or water/detergent solution effectively cleans water-soluble and water dispersible compounds; mineral spirits can dissolve many oil-based materials.
- The rinse must be collected in a separate container or combined with a compatible waste, labeled and disposed as a hazardous waste.
- The original, triple-rinsed container must be de-labeled and disposed as ordinary trash.

WASTE DISPOSAL by LICENSED VENDOR

- The contractor is responsible for packing, labeling, and removing all wastes. The contractor is also responsible for preparing all hazardous waste manifests and “Land Ban” forms for the waste manager’s signature.
- The waste manager reviews and logs all manifests.

Copies of the manifests are retained for not less than 3 years. The disposal contractor must be notified by telephone if the destination manifest is not returned to the Hospital within 35 days from the disposal.

SPECIAL WASTE STREAMS

- **Hazardous/Non-Hazardous Pharmaceutical Waste Management:** (Refer to Pharmacy Policies and Procedures).
- **Oil and Oily Debris:** Although oil is not considered a hazardous chemical waste, it must be disposed of appropriately. Waste oil is not disposed in the waste stream or with ordinary trash.
Waste oil will generally be from plant operation's equipment and will be transferred to and stored in a 55-gallon steel drum. On an as needed bases a licensed contractor will dispose of the waste oil.

Oily debris and solids will be stored in a 35-gallon open top drum. On an as needed bases a licensed contractor will dispose of the waste oily debris.

Cooking oil is collected and sent for recycling by the dietary department. Waste cooking oil should never be deposited down the drains.

- **Paint, Paint Thinner and Paint Debris:** Oil based paint if used, is kept separate from water-based paint. Water based paint is non-hazardous if it does not contain metal pigments. Water-based paint is reused and mixed whenever possible. Non-hazardous paint can be dried and disposed as general trash. Oil-based paint also should be reused. Collect oil paint and thinner in separate 55-gallon drums, apply the appropriate labeling and dispose as a hazardous chemical waste.
- **Spray Paint** – Cans will be punctured using an Aersolv ® recovery device. The liquid from the cans will be collected in a 55-gallon drum and the systems filter will filter VOC's to 70% less than the 300-ppm limit. Prior to the end of a one-year period a licensed contractor will dispose of the waste liquid.

UNIVERSAL WASTE

These are hazardous wastes prior to being classified as Universal waste:

- **Fluorescent Lamps:** These are not disposed with normal trash. Fluorescent lamps contain small amounts of mercury and are recycled through recycling vendor E-Waste Plus. Used lamps are collected in appropriate closed containers in the Engineering department. Lamps are kept whole; they are never intentionally broken or crushed.
- **Batteries:** All batteries are disposed through the Engineering department. Containers are located in the hallway by the Engineering department and at the south end of the building inside the door to the loading dock and disposed of by recycling vendor E-Waste Plus.

- **Mercury-containing items:** Thermometers containing mercury are no longer used at Blythedale; however, there are still some items in the Mechanical Rooms that contain mercury. If there is breakage of any of these, the Hospital's Safety policy, *Spill Incidents: Handling, Reporting, and Investigating (S-6)* is followed. All mercury-containing items are recycled. This is handled by the Engineering department.
- **Computers, CRTs, and Electronic Equipment:** These are not disposed with normal trash. They are disposed of through our recycling vendor –E-Waste Plus.
- **PCPB containing Ballasts:** These are not disposed with normal trash. They are removed and stored by engineering until pick-up by our recycling vendor –E-Waste Plus.

PERSONNEL TRAINING

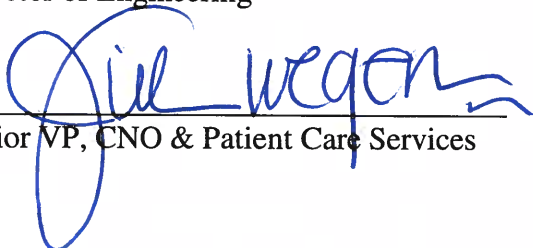
All Lead/Supervisor staff are trained in proper handling, storage, and disposal of waste. This training consists of: proper waste handling and emergency procedures during normal operations and emergencies, and preparedness and prevention.



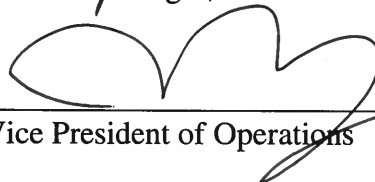
Director of Engineering



General Manager, Environmental Services



Senior VP, CNO & Patient Care Services



Vice President of Operations