



UNIVERSAL WASTE MANAGEMENT PLAN

Copies of this plan will be made available to all members of the John Jay College community with the potential to generate universal waste.

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I. Purpose

The purpose of this document is to present procedures to be followed in complying with the Resource Conservation and Recovery Act (RCRA) as it applies to Universal Wastes. This document compiles in one location many of the items necessary to document compliance with RCRA. This document is also written to comply with the City University of New York's (CUNY) Environmental Health and Safety Policy Manual, specifically the Universal Waste Management Policy and Procedures.

II General Responsibilities

John Jay College administrators, faculty, staff, students, contractors and other parties on campus who handle or generate universal wastes are required to properly handle, store and label these wastes and to comply with applicable federal and state regulations. The Environmental Health & Safety Officer (EHSO) and campus administration are responsible to ensure that all applicable parties on campus comply with these requirements. All who use or handle universal wastes are responsible to follow the policies and procedures set forth in this Universal Waste Management Plan. It is the responsibility of all to see that universal wastes are managed in a safe, healthful, and environmentally sound manner.

Under federal and state regulations, generators of universal waste are accountable for the management of these wastes. Civil and/or criminal penalties may result from failure to comply with these requirements. At John Jay College, generators of universal wastes may be academic facilities such as laboratories or art rooms. However, facility staff, during their operations, will generate most universal wastes. While John



Jay College is responsible for maintaining compliance, a student, faculty member, staff person, supervisor, or department head could have individual liability in the event of a violation of environmental requirements. Federal or state environmental personnel have the authority for the inspection of laboratories, storage areas, and other related locations for compliance with applicable regulatory requirements at anytime.

Within the CUNY/John Jay College system the following general responsibilities are identified.

The John Jay College **President** is responsible for:

- Implementation of the Universal Waste Management Policy and Procedures at John Jay College.
- Communicating the importance of the Universal Waste Management Policy and Procedures throughout the organization.

The John Jay College **Vice President for Finance and Administration** is responsible for:

- Providing adequate resources to help assure compliance with universal waste regulations and the Universal Waste Management Policy and Procedures.
- Tracking and reviewing universal waste compliance performance.

The John Jay College **EHSO** is responsible for:

- Reading and understanding federal, state, and city laws, rules, and regulations relating to universal waste and stay current with changes in the laws, rules, and regulations.
- Developing the John Jay College's Universal Waste Management Plan which achieves the goals of CUNY's Universal Waste Management Policy and Procedures and which addresses the particular needs of John Jay College with respect to the management of Universal Wastes.
- Implementing the John Jay College's Universal Waste Management Plan.
- Maintaining required documents and records of universal waste training, and the management of universal wastes, including shipment, and disposal activities.
- Training faculty, staff, and students at John Jay College for the performance of their tasks as they may relate to Universal Wastes in an efficient and competent fashion and the provision of instruction regarding the impact that their activities can have on the environment if performed incorrectly.
- Direct coordination with on campus contractors regarding the management of universal wastes.
- Monthly inspection of areas where Universal Wastes are stored to ensure that Universal Wastes have been properly identified, labeled, and stored for collection and disposal.
- Awareness of the current legal requirements concerning universal waste and to contact the CUNY Office of General Counsel when questions arise.
- Arrangement of universal waste pickups and to ensure that disposal is safely and completely performed.



Universal Waste Generators

John Jay College personnel who manage or generate Universal Wastes are responsible to:

- Read and understand CUNY's Universal Waste Management Policy and Procedures and John Jay College's Universal Waste Management Plan.
- Actively participate in the John Jay College's waste minimization program by conducting their work in a manner to minimize the generation of universal waste and the potential adverse environmental impacts resulting from their work.
- Be familiar with the properties, health risks, and precautions required for handling each universal waste.
- Become familiar with available data concerning wastes generated; use reference books, articles, Material Safety Data Sheets (MSDSs), and the John Jay College standard operating procedures (SOPs).
- Select and use appropriate personal protective equipment (*e.g.*, gloves, goggles, labcoat, or other measures as may be applicable) required to safely work with Universal wastes.
- Contact the EHSO with any questions regarding waste management, including training, waste identification, regulations, reference materials or any aspect of chemical or waste management.

DASNY (Dormitory Authority of the State of New York)

DASNY also has responsibility for universal waste that it generates during activities it and its contractors conduct on campus, including training responsibilities for contractors handling or otherwise managing universal wastes.

Storage and disposal

- DASNY to coordinate with the John Jay College EHSO to evaluate environmental implications of activity; establish specific environmental regulatory responsibilities with respect to a given project. John Jay College's EHSO will verify that compliance is being maintained.
- DASNY to establish universal waste storage area, train its personnel, and comply with applicable RCRA requirements, or ensure that its contractors comply with requirements.
- DASNY to provide John Jay College's EHSO with copies of disposal records for universal waste.
- Fluorescent light bulbs are hazardous wastes if broken. DASNY is responsible for management of its broken bulbs as hazardous waste; disposal will be performed using DASNY I.D. number, not John Jay College's I.D. number.
- Copies of management and disposal records are to be provided to John Jay College's EHSO.
- DASNY universal waste to be clearly segregated from campus universal waste while in storage.

If you have any questions or uncertainties about Universal Wastes or whether any materials are regulated as universal wastes, please contact the EHSO, Ext. 8990.



III. Universal waste management

A. Universal waste generation and identification

The success of the universal waste management program begins with how well individuals that generate universal wastes are aware of their responsibilities. Universal wastes must be properly packaged, labeled, and then stored at the on-site storage area. If in doubt with any aspect of the waste identification, call the EHSO, Ext. 8990 for guidance.

Universal wastes, such as batteries, thermostats and lamps are generated and managed throughout the John Jay College campus. In the following sections, the above-referenced universal wastes and other infrequent universal wastes are described.

Waste identification

Universal wastes are generated in a wide variety of settings and by a wide community, including colleges and businesses. Universal wastes are a subset of hazardous wastes. Universal wastes consist of:

- **Pesticides** that have been recalled or banned from use;
- **Batteries** such as nicked-cadmium, mercury, and lead-acid;
- **Lamps** that contain mercury and sometimes lead such as fluorescent, metal halide, HID and neon; and
- **Thermostats and other equipment** that contain mercury such as switches.

Before the universal waste rule these materials had to be managed as hazardous waste. The rule eases the regulatory burden by streamlining the requirements for notification, labeling, packaging, accumulation time limits, employee training, and reporting.

B. Universal waste management requirements

There are a few general requirements for the management of universal wastes:

- universal wastes must not be disposed off on site.
- universal wastes must not be treated or diluted.
- releases must be prevented. and
- an enclosed, secure storage area for the wastes must be designated with a sign identifying it as the "Universal Waste Storage Area."

C. Small quantity handlers of universal wastes

A small quantity handler of universal wastes is one where there is less than 5,000 kilograms (11,000 pounds) of universal wastes is on site at any time. John Jay College is a small quantity handler. Small quantity handlers do not have to register or notify the USEPA or NYSDEC regarding universal waste activity.



D. Universal waste labeling

The universal waste or the container of universal waste must be labeled or clearly marked with the words

- Universal Waste – [batteries] [lamps] [thermostats] [pesticides] (as applicable)

Also, the date that the universal waste was generated or the date that the first universal waste was placed in a container should be included on the label. For example, use a marking pen to write the label or original packaging for fluorescent bulbs.

E. Universal waste accumulation time limit

Universal waste may not be accumulated for more than one year from the date that the universal waste is generated or received from another handler. Federal regulations require that the handler be able to demonstrate the length of time the universal waste has been accumulated. Personnel responsible for the generation and handling of universal wastes, such as lampers, must label each universal waste, or alternatively, each container of universal waste with the date that the universal waste was placed in the container. Universal waste or containers of universal waste shall be managed such that the universal waste is not accumulated for more than one year.

F. Batteries

Battery means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

Universal waste batteries must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage in a container. The container must be closed, structurally sound, compatible with the contents of the battery.
- The following activities may be conducted as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
 - sorting batteries by type;
 - mixing battery types in one container;
 - discharging batteries so as to remove the electric charge;
 - regenerating used batteries;
 - disassembling batteries or battery packs into individual batteries or cells;
 - removing batteries from consumer products; or
 - removing electrolyte from batteries.



If the electrolyte is removed from batteries, or other solid waste (e.g., battery pack materials, discarded consumer products) is generated as a result of the activities listed above, a determination must be made whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.

- If it exhibits a hazardous characteristic, the waste must be managed as a hazardous waste.
- If the electrolyte or other solid waste is not hazardous, the waste may be managed in any way that is in compliance with applicable federal, state or local solid waste regulations.

Containers of universal waste batteries must be marked with the words:

- Universal Waste – Batteries, **and**
- the date the batteries were first placed in the container.

Note: John Jay College has established a recycling program for batteries; contact the EHSO for additional information.

G. Pesticides

Universal waste pesticides. Universal waste pesticides are recalled pesticides that are suspended or cancelled under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Other waste pesticides are not universal wastes. Non-universal waste pesticide wastes are managed under hazardous waste regulations if they are listed or exhibit a characteristic.

Universal waste pesticides must be managed in a way that prevent releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

- A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or
- A container that does not meet the requirements the above must be overpacked in a container that does meet the requirements.

Universal waste pesticide containers must be labeled with the words

- Universal Waste – Pesticides, **and**
- the date the waste pesticide was initially generated.

Note: Most universal waste pesticides have been previously removed from the John Jay College campus. In the event that universal waste pesticides are identified, contact the EHSO to arrange for the proper management or disposal.



H. Thermostats and other mercury-containing equipment

Universal waste thermostats. Universal waste thermostats must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- Any universal waste thermostat that shows evidence of leakage, spillage, or damage must be placed in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage.
- Mercury-containing ampules may be removed from universal waste thermostats provided the handler:
 - removes the ampules in a manner designed to prevent breakage of the ampules;
 - removes ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage);
 - ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of 40 CFR 262.34;
 - immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;
 - ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
 - ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
 - stores removed ampules in closed, non-leaking containers that are in good condition;
 - packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.
- A small quantity handler of universal waste who removes mercury-containing ampules from thermostats must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR 261, Subpart C:
 - mercury or clean-up residues resulting from spills or leaks; and/or
 - other solid waste generated as a result of the removal of mercury-containing ampules (e.g., remaining thermostat units).

Containers must be labeled with the words

- Universal Waste – Thermostats, **and**
- the date of the first thermostat was placed in the container.

Note: John Jay College has established a recycling program for thermostats and other mercury-containing equipment; contact the EHSO for additional information.



I. Lamps

Lamps. Universal waste lamps must be managed in a way that prevents releases of any universal waste or hazardous waste to the environment, as follows:

- Lamps must be placed in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. The original packaging, if sound, meets these requirements. Such containers and packages must remain closed and must lack evidence of damage that could cause leakage.
- Any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury must be immediately cleaned up and placed in a container. Containers must be kept closed, be structurally sound, be compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury.

The lamp container must be labeled or clearly marked with the words:

- Universal Waste – Lamps, **and**
- the date that the first lamp was placed in the container.

Fluorescent lamp recycle program

There is a fluorescent lamp recycling program for the correct handling of fluorescent bulbs on campus. Most used fluorescent lamps are classified as universal waste. The inside of a fluorescent tube is coated with chemicals and the tube contains a small amount of mercury vapor. **Fluorescent lamps should not be placed in the regular trash.** Lamps must be disposed of by contacting the Office of Buildings and Grounds for lamp replacement or disposal of used fluorescent lamps.



IV. Spill control

In the event of a liquid universal waste oil spill or leak, the person discovering the release must immediately initiate the following actions:

- Extinguish all sources of ignition and isolate incompatible or reactive chemical substances.
- If there is an immediate threat to human health, evacuate the immediate area.
- Attempt to stop or contain the spill/release at the source (provided there are no health or safety hazards and there is a reasonable certainty of the origin of the leak).
- Isolate all potential environmental receptors such as floor drains, catch basins, sumps, exposed soil, and runoff areas (provided there are no health or safety hazards and there is a reasonable certainty of the origin of the leak).
- Contact the EHSO, Ext. 8990 and/or Security (T-Bldg – Ext. 8740, North Hall – Ext. 8266, BMW Bldg – Ext. 8700, Westport – 484-1120) to provide information regarding a spill event.
- If the spill is mercury from lamps, thermostats or other mercury-containing devices, or any other Universal waste:
 - contact the EHSO immediately, Ext. 8990
 - if no answer, contact Security (T-Bldg – Ext. 8740, North Hall – Ext. 8266, BMW Bldg – Ext. 8700, Westport – 484-1120)
 - evacuate everyone from the area;
 - if possible, open windows and doors to ventilate the area during cleanup; otherwise, seal off the area as well as possible;
 - **DO NOT** use a vacuum cleaner to clean up a mercury spill. A vacuum cleaner will spread the mercury vapors throughout the area, increasing the chance of exposure.

The Spill Response Team Coordinator will direct and coordinate the spill clean-up activities and evaluate if an environmental contractor will be required to perform the clean-up activities. The Spill Response Team Coordinator will then initiate any notification procedures.

V. Training

General

John Jay College personnel who generate universal waste are required to have training *appropriate to their level of responsibility*. This training will be provided initially at their time of employment by the EHSO. Special training will also be provided by EHSO upon request to areas with unusual universal waste management requirements. Training for universal waste management on campus will be updated to



reflect the most current regulatory requirements. Training materials are included in Appendix A, and include the following topics at a minimum:

- identification of universal waste;
- container use, marking, labeling, and on-site transportation; and
- storage area requirements

Special training

Individuals with specialized duties, and anyone with oversight responsibility for packaging and transportation of universal materials, are required by law to have additional training. No John Jay College personnel may arrange for disposal of universal waste materials without completing the appropriate training.

VI. Recordkeeping

Small quantity handlers of universal waste are not required to maintain records.

VII. Information and contacts

City University of New York; Environmental, Health, and Safety Policy Manual
USEPA, Hazardous Waste Regulations; 40 CFR 260 *et seq.*
NYSDEC Hazardous Waste Regulations; 6 NYCRR 370 *et seq.*

For further information or answers to questions contact the John Jay College Environmental Health & Safety Officer, Ext. 8990.