



Hazardous Waste Contingency Plan

These procedures were developed by the Office of Environmental Health and Safety of Cleveland State University, for the purpose of addressing chemical waste management on campus. The procedures were developed for the exclusive of CSU. No portion of this manual may be reproduced in any form without the expressed written consent of Cleveland State University.

Revised, February, 2018

Table of Contents

Table of Contents.....	Page 2
Introduction.....	Page 3
Campus Buildings.....	Page 3
Response Procedures – Universal.....	Pages 4 - 5
Response Procedures – University Police.....	Pages 5 -8
Response Procedures – Emergency Response Coordinator.....	Pages 9 - 13
Program Evaluation.....	Page 14
Appendix A – Emergency Response Spill Equipment.....	Pages 15 – 16
Appendix B – Emergency Evacuation Routes.....	Pages 17 – 17P
Basic Science.....	Pages 17A – 17F
Science Research.....	Pages 17G – 17L
Fenn Hall (Stilwell Hall).....	Pages 17M – 17Q
Appendix C – Policy and Procedures for Disposing of Chemical Waste.....	Pages 18 - 20
Appendix D – Job Descriptions.....	Pages 21 - 24
Appendix E – Hazardous Waste Fundamentals.....	Pages 25 – 26
Appendix F – Universal Waste Materials.....	Page 27 - 29

Introduction

Provisions established under the Resource Conservation and Recovery Act (RCRA) stipulate that procedures be identified for affected facilities to follow in the event of fires, explosions, or any unplanned release of hazardous wastes or hazardous waste constituents into the air, soil, surface water or sanitary sewer in any building on campus that might contain hazardous waste.

Campus Buildings

Campus buildings identified as containing hazardous waste include, but are not limited to:

Basic Science Building

**Science Research Building
Fenn Hall**

PLEASE NOTE: Regulatory oversight for radioactive materials on campus is governed by the Ohio Department of Health, Nuclear Materials Safety Program as authorized by the Nuclear Regulatory Commission. Please refer to the University Radiation Safety Manual for response to emergencies involving radioactive materials.

Response Procedures – Universal

Any person that discovers a situation such as a fire, explosion, unplanned release of hazardous waste or its constituents into the air, soil, surface water or sanitary sewers of affected buildings should immediately initiate these actions:

- 1. EMERGENCY (FIRE, EXPLOSION, MEDICAL, SPILLS)**
 - a. Activate nearest FIRE ALARM & LEAVE THE AREA**
 - b. Contact CSU Police (University Phone #9-1-1 or 8,9-1-1) from a safe distance**
 - c. Cell Phone Users also may dial 9-1-1 and tell operator to connect you with CSU Police.**

- 2. Give Dispatcher as complete a description of the incident as possible:**
 - a. Provide your name and telephone number from the location where you are calling from**
 - b. Identify the building where the accident occurred using room number or location of the accident**
 - c. Describe the type of accident: fire, leaking drum and/or container etc...**
 - d. Note any markings or identifying labels on the drum should the concern involve a hazardous waste drum**
 - e. Please note any injuries and need for medical assistance**

- 3. Await the arrival of CSU Police to reinforce and update if necessary, information previously provided that may have changed.**

Response Procedures – CSU Police

PLEASE NOTE: CSU Police shall be notified of all emergency situations arising on campus, as per Police Standard Operating Procedures. Once informed that an incident has occurred involving chemical or infectious waste, CSU Police shall initiate the following procedures:

- 1. Notify the local fire department and/or emergency medical services if the situation dictates.**

- 2. Contact the following person(s):**
 - a) EMERGENCY RESPONSE COORDINATOR:
Must be notified immediately in any emergency where chemical wastes may be involved, or if injury occurs.**

**Robert Howerton
Manager, Office of Environmental Health &
Safety
Radiation Safety Officer**

Work Hours

**Cell Phone: 216-276-4324
Office Phone: 216-687-3715**

b) EMERGENCY ALTERNATE COORDINATOR:

**Notify if Emergency Response Coordinator
cannot be reached:**

**Mike Samec
Environmental Health and Safety Officer**

Work Hours

**Cell Phone: 216-218-2183
Office Phone: 216-687-3587**

**c) SECOND EMERGENCY ALTERNATE
COORDINATOR:**

**Notify if Emergency Response Coordinator
or Alternate cannot be reached:**

**Dave Diggins
Environmental Health & Safety**

Environmental Health and Safety Officer

Work Hours

**Cell Phone: 216-318-7892
Office Phone: 216-523-7588**

d) FACILITIES MANAGEMENT (PHYSICAL PLANT)

Notify if the emergency is at the Plant Services Building

**Shehadeh Abdelkarim
Executive Director of Facilities Management**

Work Hours

**FAST Coordination Ctr. 216-687-2500
Office: 216-687-6964
Cell Phone: 216-701-8447**

e) UNIVERSITY PUBLIC RELATIONS

Official University Spokesperson

**Robert Spademan
Associate Vice President, University Marketing**

Work Hours

Office Phone: 216-523-7284

3. EVACUATE THE BUILDING. (See Appendix B for evacuation routes for all buildings housing hazardous materials) In case of fire or explosion involving hazardous waste, proceed as follows:

- a. ACTIVATE FIRE ALARMS if not yet done so**
- b. University employees in the area of the incident shall initiate evacuation, and check room(s) for occupants as they leave. Employees shall be observant for and sensitive to the needs of handicapped individuals.**
- c. Close all doors upon leaving**

- d. Ensure all persons are kept as far away from the building as possible. No re-entry is permitted unless authorized to do so by the Emergency Response Coordinator, or his/her designee.**
- e. Permit only authorized Emergency Response Units and University personnel in possession of appropriate identification**

4. Immediate action should be taken to control and contain the emergency if possible. Emergency spill equipment is located in various areas of the University. See Appendix A for a list of locations and types of spill equipment available.

Response Procedures – Emergency Response Coordinator

It will be the responsibility of the Emergency Response Coordinator (or designee) once contacted to make the determination whether or not the incident in question requires implementation of the provisions of the University's Hazardous Waste Contingency Plan. Plan implementation will occur in response, but will not be limited, to the following situations:

- 1. Any fire involving hazardous waste; or**
- 2. Any explosion involving hazardous waste; or**
- 3. Any uncontrolled hazardous waste reaction that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable or explosive gases, fumes or vapors, harmful dust or explosive conditions; or**
- 4. Any hazardous waste release, outside of a secondary containment system, that causes or has the potential to cause off-site soil and/or surface water contamination; or**
- 5. Any hazardous waste release that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable or explosive gases, fumes or vapors, harmful dust or explosive conditions.**

In addition, it will be the responsibility of the Emergency Response Coordinator (or designee) to notify appropriate support and regulatory agencies concerning the situation. Particular attention will focus on discretion, depending on the type of emergency. The agencies that may be contacted are:

**1. Cleveland Fire Department/HazMat
(If not already called)
1645 Superior Ave.
Cleveland, Ohio 44114
Phone: 911 or 216-621-1212**

**2. Cuyahoga Emergency Communication System
Local Emergency Planning Committee (LEPC)
1255 Euclid Ave.
Cleveland, Ohio 44115
Phone: 216-771-1365
Report a spill 24- hrs. a day**

**3. Ohio Environmental Protection Agency
Division of Emergency and Remedial Response
Northeast District Office
2110 Aurora Road
Twinsburg, Ohio 44087
Phone: 330-963-1200**

**4. City of Cleveland
Department of Public Health
1925 St. Clair Ave.
Cleveland, Ohio 44114
Phone: 216-664-2324**

**5. Division of Air Quality
City of Cleveland
Department of Public Health
75 Erieview Plaza
Cleveland, Ohio 44114
Phone: 216-664-7442 (Air Pollution Hotline)**

**6. Northeast Ohio Regional Sewer District
Environmental & Maintenance Services Center
4747 East 49th Street
Cuyahoga Heights, Ohio 44125
Phone: 216-641-6000**

When reporting an incident, the Emergency Response Coordinator, or designee will include the following information:

- 1. Name and telephone number**
- 2. Name and address of facility (include building name and room number).**
- 3. Time and type of incident (e.g. chemical spill, fire, explosion etc...)**
- 4 .Name and quantity of material(s) involved. Give as much specific detail regarding the incident as possible, including how the incident occurred.**
- 5. Extent of injuries or damage, if necessary**
- 6. Possible hazards to human health, or the environment outside the facility.**
- 7. Other emergencies agencies that have or will be notified.**

The Ohio EPA will coordinate the emergency activities if they respond; if not the Chief of the Cleveland Fire Department (or designee) will assume responsibility if they are involved. Until such time when the Fire Chief (or designee) arrives, the University Emergency Response Coordinator (or designee) will be in charge of the incident until it is relinquished to another federal, state or local emergency authority agency.

A command post will be set up to coordinate the emergency response activities. The University's Emergency Response Coordinator will be stationed by the command post to provide any information or services that are requested by any of the above agencies. The Emergency Response Coordinator will notify the University Administration of the events. Official statements regarding the incident/emergency will be made to the public only through the University's Public Relations spokesperson.

IF the University Hazardous Waste Contingency Plan is implemented, the Emergency Response Coordinator shall, as required by OAC 3745-65-56 (I), submit within fifteen (15) days after the incident a written report on the incident to the Director of the Ohio EPA. The report shall include:

- (1) Name, address, and telephone number of the owner or operator;**
- (2) Name, address and telephone number of the facility;**
- (3) Date, time, and type of incident (e.g. fire, explosion, etc...);**
- (4) Name and quantity of material(s) involved;**
- (5) The extent of injuries, if any;**
- (6) An assessment of actual or potential hazards to human health or the environment, where applicable; and**

- (7) Estimated quantity and disposition of recovered material that resulted from the incident**

Program Evaluation

The components of this Hazardous Waste Contingency Plan will be reviewed by the Manager, Office of Environmental Health and Safety on an annual basis.

Appendix A

Emergency Spill Equipment

A. Location

Emergency spill equipment is kept in cabinets in secured areas of the following buildings:

Basic Science.....Lower Parking

Science Research.....Lower Parking & 4th Floor Stairwell

Fenn Hall (Stilwell Hall)Lower Parking

The spill equipment is evaluated on a weekly basis, with records kept of such evaluations. Because the Basic Science, Science Research and Fenn Hall all share the same Lower Parking Area – references to Emergency Spill Equipment being located in Lower Parking shall be taken as being one cabinet.

B. List of Spill and Related Safety Equipment

1. Spill Tamer Kit

Contains material for cleanup and disposal of alkali, flammable solvent, acids, and mercury. Each kit contains a spill tamer absorbent, neutralizers for acid and alkalis, mercury tamer, mercury collect containers, gloves, brush and pan, spare disposal bag and a Safety Handbook

2. Spill Pillows/Absorbent

Material can be used for chemical, biological and radioactive spills, although specific procedures for cleanup of radioactive materials can be found in the University Radiation Safety Manual.

3. Fire Extinguishers
4. Face Shields with headgear and visor
5. Chemical resistant gloves
6. Bonding/grounding wire (for transferring chemicals)
7. OSHA Response Suits with hood and shoe covers.
8. Duct Tape (for emergency repairs)
9. Emergency Barricade Tape
10. Plastic Bags labeled "Universal Hazardous Waste"
11. Copy of University Contingency Plan

Appendix B

Emergency Evacuation Routes

The following pages are EMERGENCY EVACUATION ROUTES for buildings on campus housing HAZARDOUS WASTE. Exits that are designated as “GENERAL” are evacuation routes that can be used by the general public. Routes marked “HC” are evacuation routes that are accessible to handicapped individuals. Floor plans are listed alphabetically.

Appendix C

Policy and Procedure for Disposing of Chemical Waste at Cleveland State University

Cleveland State University’s management of hazardous waste is regulated under the Resource Conservation and Recovery Act (RCRA) of 1976. Legislation is included as part of the Code of Federal Regulations (CFR) in 40 CFR. These regulations establish stringent requirements regarding the generation, transportation, and disposal of chemical wastes. Supporting state legislation is promulgated in Chapters 3734 and 3735 of the Ohio Revised Code (ORC). The University recognizes that failure to comply with these regulations may result in the imposition of fines.

The University has chosen a **small quantity generator** designation for purposes of hazardous waste management; hazardous waste removal and disposition occurs within the ninety (180) days allotted by regulations. An essential facet to the success of this program occurs with primary supervision and enforcement at each satellite generation point. In order to maintain compliance, the following procedures must be adhered to:

1. All matters and concerns pertaining to chemical, biohazardous and radioactive wastes are to be directed to Robert Howerton, Manager, Office of Environmental Health and Safety, at (216) 687-9306
2. The Hazardous Waste Storage Area on campus is located in the Science Research Building (Room 473).
3. All waste set forth for disposal must be clearly identified as Hazardous Waste and containers kept closed when waste is not being added. The name, chemical state of the waste and quantity shall be recorded on a University Hazardous Waste Inventory Form. **Unidentified waste (“unknowns”) will not be accepted; individual departments will be responsible for the cost of analysis.**
4. Waste may be removed to the Hazardous Waste Storage Area by contacting the Office of Environmental Health and Safety.
5. Acid products free of all other hazardous waste properties may be disposed of in sinks leading to acid neutralization tanks. Sinks with such features are located in the Basic Science and Science Research Buildings. No other sinks may be used. Residues (e.g. sludge) from both acid and base neutralization are to be evaluated when removed from tanks and sinks used for neutralization.
6. Bases free of all other hazardous waste properties can be neutralized using a weak (1.0 Normal) hydrochloric acid solution. Residual material resulting from this process will be evaluated for hazardous waste properties. Following verification of acidity (litmus or other appropriate method)

- the solution may then be disposed of in a sink fitted with acid neutralization capabilities.
7. Acid neutralization tanks will be inspected periodically by an approved company to ensure proper function.
 8. The Office of Environmental Health and Safety shall be responsible for proper disposal of all hazardous and/or potentially hazardous waste on campus. Designated site coordinators, as well as faculty and staff in the Departments of Biological, Geological and Environmental Sciences, Chemistry, Biomedical and Chemical Engineering and Plant Services will work closely with the Office of Environmental Health and Safety to ensure that the procedures set forth in this plan are followed.
 9. The Office of Environmental Health and Safety will inspect and evaluate all areas of the University where hazardous, biohazardous and radioactive waste is being generated and stored to assure compliance with regulations set forth by the federal Environmental Protection Agency and the State of Ohio, that pertain to chemical use and disposal.
 10. The Office of Environmental Health and Safety will develop and provide training required for all University faculty and staff whose job description mandates the handling of hazardous waste. Provisions and programs for retraining on an annual basis will also be provided.

Appendix D

Job Descriptions of Generators of Hazardous Waste Cleveland State University

The following is a list of individuals (including job titles) whose duties would include involvement with hazardous waste.

Robert Howerton, M.A., CHMM
Manager, Office of Environmental Health and Safety
Radiation Safety Officer

Develops programs and coordinates all University activities pertinent to handling, storage and transportation of hazardous wastes and monitors their effectiveness. Inspects facilities that generate and/or store hazardous wastes, and provides oversight for all inspections performed by other program participants.

Mike Samec, B.A., AHAS, AHES
Environmental Health and Safety Officer

Assists in coordination and performance of activities pertaining to handling, storage and transportation of hazardous wastes. Inspects hazardous waste generation areas and reports findings to the Environmental Health and Safety Officer. Responsible for transporting hazardous waste containers to storage area, and prepares waste for ultimate shipment. Serves as Secondary Alternate Emergency Response Coordinator.

Dave Diggins, B.S., AHAS, AHES
Environmental Health and Safety Officer

Assists in coordination and performance of activities pertaining to handling, storage and transportation of hazardous wastes. Inspects hazardous waste generation areas and reports findings to the Environmental Health and Safety Officer. Responsible for transporting hazardous waste containers to storage area, and prepares waste for ultimate shipment. Serves as Secondary Alternate Emergency Response Coordinator.

Dr. Jerry Reed-Mundell, Ph.D.
General Chemistry Lab Manager

Oversees operation of satellite accumulation areas. Ensures hazardous waste generated is placed properly identified, placed into appropriate containers and labeled. Coordinates removal with the Office of Environmental Health and Safety.

Vania De Paoli,
Chemistry Safety Officer

Oversees operation of satellite accumulation areas. Ensures hazardous waste generated is placed properly identified, placed into appropriate containers and labeled. Coordinates removal with the Office of Environmental Health and Safety.

Michele Zinner, M.S.
Laboratory Manager, BGES

Oversees operation of satellite accumulation areas. Ensures hazardous waste generated is placed properly identified, placed into appropriate containers and labeled. Coordinates removal with the Office of Environmental Health and Safety.

Plant Services

The following is a list of Plant Services employees (including job titles) by specific department specialty whose duties would potentially include involvement with hazardous waste:

Electricians Operations

Rajiv Chokshi.....	Supervisor of Electrical
Robert Annen.....	Electrician 1
Mark Bryant.....	Asst. Electrician
Richard Hokerz.....	Electrician 1
Kevin Kantor.....	Crew Leader
William Kuchik.....	Electrician 1
Andy Marton.....	Electrician 1
Dave Pekala.....	Crew Leader

Facilities Management (Environmental Operations)

Mark Cunningham...Asst. Dir. of Facilities Management
Chris Guest.....Crew Leader
Gary Ciomek..... Air Quality Technician 3
Mike Gilligan.....Air Quality Technician 3
Neal Johnson..... Air Quality Technician 3
Tom Jones.....Air Quality Technician 3
Robert Kendrick.....Air Quality Technician 3
Gary Kushner.....Air Quality Technician 3
Kishon McDonald.....Air Quality Technician 3
Lisa Milota.....Air Quality Technician 3
Andy Pankuch..... Air Quality Technician 3

Plumbers

Jose Bosque.....Maintenance Repair Worker 3
Thomas Ensley.....Maintenance Technician
Fred Wolff.....Crew Leader
Dan Wright.....Plumber 1

Maintenance Technicians

Thomas Gallagher..... Maintenance Repair Worker 3
Bruce Lewis.....Crew Leader
Adonis Nunley.....Maintenance Repair Worker 3

Michael Nagel.....Superintendent, Building Operations

Maintenance Motor Pool

Daniel Nelson.....Coordinator

The individuals listed above (high school graduates) potentially may be involved in the generation of hazardous waste. Their duties are to ensure that hazardous waste generated is identified, placed into appropriate containers and properly labeled. Removal is coordinated with the Office of Environmental Health and Safety.

Hazardous Waste Fundamentals

Effective hazardous waste management is a team effort. A successful management plan should be created based on the following fundamental aspects:

WASTE INVENTORY

The identity and quantity of all waste generated shall be known, in order to facilitate a proper determination and segregation as a hazardous waste.

EVALUATE HAZARDOUS WASTE DISPOSAL AND TRANSPORTATION

Ultimate responsibility for proper disposal lies with the waste generator. Contractors solicited to transport should be extensively evaluated and reviewed to establish compliance with applicable RCRA regulations.

TREATMENT, STORAGE AND DISPOSAL FACILITIES

Hazardous waste storage on the premises for ninety (90) days or longer requires that a facility seek licensure as a storage site. Subsequently all waste accumulated shall be transported off campus within this time frame. All facilities enlisted by the University to store waste generated on campus shall be scrutinized to ensure they possess the necessary licenses for such activities, and that all provisions set forth by RCRA for storage and disposal facilities are adhered to.

WASTE MINIMIZATION

Generators of hazardous waste shall document a plan to demonstrate efforts to reduce waste streams. Academic areas continue to strive towards micro-experimentation in the laboratories; researchers are encouraged to order only those quantities that will be totally consumed as part of the experimentation project. Facilities personnel have made the use of non-toxic, environmentally “green” products a common practice, and promote the use of such materials wherever possible.

RECORDKEEPING

Complete record of all hazardous waste handling, generation, storage, and shipping including personnel training, shall be maintained.

Appendix F

Universal Waste

In accordance with applicable regulations, a waste must be a hazardous waste before it can be defined as a universal waste. Cleveland State University manages the following hazardous waste items as universal waste in accordance with the Universal Waste Rules:

Lamps
Non-Alkaline Batteries
Non-PCB Ballasts
Computer Equipment & Monitors

These items, with the exception of the computer equipment and monitors, are collected by the Office of Environmental Health and Safety and stored in Science Research Room B52. An inventory of all items placed into this area is maintained, including quantities and dates. The lamps, batteries and ballasts are shipped out periodically during a calendar year.

Computer equipment to be disposed of is handled by the University's Information Services and Technology (IS&T) Department.

Lamps

Incandescent, fluorescent, metal halide, neon, high-intensity discharge, high-pressure sodium and mercury vapor illuminating items are generally considered lamps. Fluorescent lamps may contain mercury, cadmium and lead. Maintenance and repair personnel are to contact the Office of Environmental Health and Safety prior to bringing the material to the Universal Waste Storage Area in SR B52.

All lamps are shipped out intact – there is to be no crushing on-site.

Batteries

Batteries are returned, where possible, to a vendor during replacement. Otherwise they are also sent out for recycling.

Various types of batteries are present at Cleveland State University. The battery-types and manner of disposal are as follows:

Lead – Acid Batteries

Lead is considered to be a hazardous substance. Items containing lead cannot be discarded in regular solid waste containers (dumpsters, garbage cans, etc...). Batteries such as these are common in various types of vehicles (cars, golf carts, tractors etc...). All such batteries are to be returned to vendors for recycling. Other sources of lead-acid batteries (older cell phones and video cameras) are to be **disposed of by notifying the Office of Environmental Health & Safety for processing as a hazardous waste.**

Nickel-Cadmium (Ni-Cad) Batteries

Cadmium is considered to be a hazardous substance. Items containing cadmium cannot be discarded in regular solid waste containers. Examples of Ni-Cad battery use include rechargeable-type batteries commonly used for pagers, two-way radios, cordless and cell phones, laptop computers and video cameras. All such batteries are to be **disposed of by notifying the Office of Environmental Health & Safety for processing as a hazardous waste.**

Mercury Batteries

Mercury is considered to be a hazardous substance. Items containing mercury cannot be discarded in regular solid waste containers. Batteries containing mercury are common to hearing aids. All such batteries are to be **disposed of by notifying the Office of Environmental Health & Safety for processing as a hazardous waste.**

Alkaline Batteries

Alkaline batteries are the battery types found in most households and are non-rechargeable. Their use in equipment and appliances is widespread, from flashlights and radios, to CD players and garage door openers. Batteries of this type do not possess hazardous materials in amounts that require processing as hazardous waste. The University is investigating alternate forms of disposal (recycling). **These batteries may be disposed of as regular solid waste.**

Lithium Batteries

Lithium batteries have increased in use over the past few years. They are found in items such as watches, cameras and some computers. These batteries do not possess hazardous materials in amounts that require processing as hazardous waste. The University is investigating alternate forms of disposal (recycling). **These batteries may be disposed of as regular solid waste.**

Computer Equipment

Disposal of computer systems (CPU, monitor, keyboard, speakers, printers, scanners, mice, etc...) is handled by The University's Department of Information Services and Technology. The IS&T Department contracts with a disposal firm and facilitates recycling while ensuring any data is removed in a secure fashion prior to submission for recycling. The material is sent to a facility that separates the plastic materials from the electronic components and submitted for recycling. The computer equipment is shipped out periodically during a calendar year and records are maintained in the IS&T Department.