

YOUNGSTOWN STATE UNIVERSITY
HAZARDOUS WASTE CONTINGENCY PLAN

Revised June 2009

This plan was prepared by the Department of Environmental and Occupational Health and Safety of Youngstown State University. The plan is intended for the exclusive use of the university in dealing with chemical waste management on the campus of Youngstown State University. No part of this manual may be reproduced on any form or by any electronic or mechanical means including information storage and retrieval systems without permission in writing from Youngstown State University.

TABLE ON CONTENTS

Introduction.....	1
Instructions to First Responders.....	1
Instructions to Campus Police	2
University Contact Persons.....	2
Instructions For Emergency Response Coordinator	3
Telephone Numbers of Emergency Agencies.....	3
Emergency Spill Equipment	5
Emergency Evacuation Routes	7
Policy and Procedure for Disposing of Chemical Waste at Youngstown State University	8
An Overview of the Elements of the Resource Conservation and Recovery Act	11
Elements to Consider in a Waste Management Plan	13

INTRODUCTION

As required under the provisions of the **Resource Conservation and Recovery Act [RCRA (40 CFR)]**, the following procedures are to be followed in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous wastes or hazardous waste constituents to air, soil, surface water, or sanitary sewer in any building on campus that might house hazardous waste. These buildings include, but are not limited to: Ward Beecher Hall, Moser Hall, Cushwa Hall, Central Services Building (Print Shop), Bliss Hall, E.J. Salata Facilities Complex (Physical Plant), and the Chemical Management Center. **Radioactive materials** fall under the University's **Nuclear Regulatory Commission (NRC)/Ohio Department of Health (ODH)** licenses and are not part of this plan. The University's Radiation Safety manual will be followed for all incidents involving radioactive materials.

A. INSTRUCTIONS TO FIRST RESPONDERS

Any person discovering an accident that reasonably appears to involve any of the items mentioned above should immediately initiate the following actions:

1. **FIRE OR EXPLOSION EMERGENCY** **NON-FIRE EMERGENCY**
 - a. Activate the nearest **FIRE ALARM** a. Contact Campus Police - **DIAL 911**
 - b. Call Campus Police - **DIAL 911**
2. Give Campus Police a complete description of the incident.
 - a. Give your name and the telephone number from which you are calling.
 - b. Identify the building where the accident occurred and the room number or location of the accident.
 - c. Describe the type of accident: fire, explosion, chemical spill, leaking waste drum, etc.
 - d. If accident involves a chemical waste drum, provide the drum identification number or any other pertinent markings and the approximate amount of the spill in gallons.
 - e. Note any injuries: Are you or anyone else in the building injured?
3. At a safe distance, await the arrival of Campus Police to be sure that they do not need any further information.

B. INSTRUCTIONS FOR CAMPUS POLICE

When the Campus Police Department is notified that an incident involving chemicals has occurred, the following procedures will be followed:

1. Call the local fire department and/or ambulance if the situation warrants.

2. CONTACT THE FOLLOWING PERSON(S):

Home and cell phone numbers of the Emergency Response Coordinators are on file with YSU Police. Call (330) 941-3527 for dispatch.

3. EVACUATE THE BUILDING

In case of any fire, explosion, or any other incident involving hazardous waste, proceed according to the following plan:

- a. **ACTIVATE THE FIRE ALARMS** if they have not been activated.
- b. University faculty/staff in the area of the incident will initiate evacuation and check rooms for occupants. Be on the lookout for persons with disabilities.
- c. **CLOSE** all doors and windows.
- d. Be sure all persons are at least 300 feet from the building and out of the Emergency Response Unit's way.
- e. Do not allow re-entry to the building unless authorized to do so by the Emergency Response Coordinator (or designee).
- f. Permit only Emergency Response Units and University Personnel showing proper identification entrance to the building (proper identification includes University Police and staff from the Department of Environmental and Occupational Health and Safety).

4. CONTROL AND CONTAIN THE EMERGENCY

Immediate action should be taken to control and contain the emergency. Emergency spill equipment is located in various areas of the University. See the evacuation plan for the Chemical Management Center for the location of the spill equipment.

C. INSTRUCTIONS FOR EMERGENCY RESPONSE COORDINATOR

1. It will be the responsibility of the **EMERGENCY RESPONSE COORDINATOR** once on the scene to notify appropriate support agencies concerning the situation. He or she will use his or her discretion depending upon the type of emergency. These agencies may include one or more of the following:
 - a. The Youngstown Fire Department (if not already called)
420 Martin Luther King Boulevard
Youngstown, Ohio 44503
330-743-2141

- b. Mahoning County Disaster Services
700 Industrial Road
Youngstown, Ohio 44509
Chemical Hotline: 330-740-2201
Emergency Management: 330-740-2200
Local Emergency Coordinator (Walt Duzzny): 330-792-4572
 - c. The United States Environmental Protection Agency
National Response Center: 1-800-424-8802
 - d. Ohio Environmental Protection Agency
Division of Emergency Response: 1-800-282-9378
 - e. Youngstown City Health Department
345 Oak Hill Avenue
Youngstown, Ohio 44502
330-743-3333
 - f. Youngstown Air Pollution Control
345 Oak Hill Avenue, Room 25
Youngstown, Ohio 44502
330-744-1928
 - g. District Board of Health
50 Westchester Drive
Youngstown, Ohio 44515
330-270-2855
 - h. Youngstown Wastewater Treatment Plant
275 Poland Avenue
Youngstown, Ohio 44502
330-742-8820
2. When reporting an incident to any or all of these agencies, the Emergency Response Coordinator will include all of the following information:
- a. Name and telephone number.
 - b. Name and address of facility (include name of building).
 - c. Time and type of incident (e.g., chemical spill, fire, explosion, etc.).
 - d. Name and quantity of material(s) involved. Give as much specific detail regarding the hazard as possible, including how incident occurred.

- e. The extent of the injuries or damage, if any.
- f. The possible hazards to human health, or the environment, outside the facility.
- g. Other emergency agencies that have been notified or will be notified.

The EPA will coordinate the emergency activities if they respond. If not, the Chief of the Youngstown Fire Department (or designee) will assume responsibility if they are involved. Until the arrival of either of the above, the University Emergency Response Coordinator will take charge of the incident until it is relinquished to another federal, state or local emergency authority.

- 3. A command post will be set up to coordinate the emergency 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.

EMERGENCY SPILL EQUIPMENT

The following equipment should be used by first responders to a chemical emergency to control and/or contain the accident in the accumulation site at the Chemical Management Center. This equipment is inspected weekly and in the event of a spill clean up, the supplies are replenished as part of the post-operation responsibilities.

- 1. One (1) Spill Tamer Kit
This kit is to be used for the spill and disposal of hazardous alkali, flammable solvent, acids, and mercury. Each kit contains a spill tamer absorbent, neutralizers for acids and alkalis, mercury tamer, mercury collection bottle, gloves, brush and pan, spare disposal bag, labels and a Safety Handbook.
- 2. Twelve (12) Spill Control Pillows.
Pillows can be used for chemical, biological and radioactive spills. Pillows completely contain the spill using an inert and highly effective inorganic absorbent.
- 3. Two (2) Fire Extinguishers (20 lbs).
Two (2) Fire Extinguishers (7 lbs).
- 4. Two (2) Face Shields with Headgear and Visor.
- 5. Two (2) Respirators (for organic vapors).
Six (6) Replacement Cartridges.
- 6. Two (2) sets Chemically Resistant Gloves.
- 7. One (1) Bonding/Grounding Wire (when transferring chemicals).

8. Two (2) OSHA Response Suits with Hood and Shoe Covers.
9. One (1) Roll of Duct Tape (for emergency repairs).
10. One (1) Roll of Emergency Tape (used to mark off contaminated areas).
11. Ten (10) Plastic Bags (for holding).
12. One (1) Safety Fill Vent and Funnel (for emergency transfers).
13. One (1) University Hazardous Waste Contingency Plan.

EMERGENCY EVACUATION ROUTES

The following pages are emergency evacuation routes for buildings on campus housing hazardous waste. The locations of large quantity hazardous waste sites are marked by arrows on this map.

Chemical Management Center Emergency Evacuation Routes

Beeghly Center Rifle Range Emergency Evacuation Routes
Room 116

POLICY AND PROCEDURE FOR DISPOSING OF CHEMICAL WASTE AT YOUNGSTOWN STATE UNIVERSITY

The Resource Conservation and Recovery Act of 1976 [40 CFR] as amended 42 U.S.C. 6921, 90 STAT. 2806, sets forth very specific and stringent regulations regarding the generation, transportation, and disposal of chemical wastes. Companion state legislation is promulgated in Chapters 3734 and 3745 of the Ohio Revised Code.

Youngstown State University comes under both sets of guidelines and is required to comply with all of the rules and regulations as set forth by law. For the purpose of developing policy and procedure, Youngstown State University has designated itself a “large quantity” generator, and as such will subscribe to the regulations pertaining to this particular category. The University understands that failure to do so could result in the imposition of substantial fines.

It is, therefore, extremely important that these regulations, without exception, be strictly adhered to. The University presently contracts with EPA approved disposal agents and, as set forth in the Code of Federal Regulations and the Ohio Revised Code, provides for the proper removal and disposal of chemical wastes as required by law.

Of paramount importance is the first-level supervision and enforcement at each generation point (including all individual laboratories, classrooms and shops). The following are procedures that must be adhered to for Youngstown State University to remain in substantial compliance with these Federal and State codes:

1. All matters and questions regarding chemical waste disposal should be directed to the Director of Environmental and Occupational Health and Safety, Room 2046 Cushwa Hall, 330-941-3700.
2. There are two (2) central collection points on campus. All areas on campus with the exception of the Physical Plant will have their accumulated chemical waste delivered to the hazardous Waste Storage Area located in the Chemical Management Center, 124 Lincoln Avenue. The Physical Plant will store their accumulated chemical waste at the E.J. Salata Facilities Complex.
3. Waste solvents are the largest quantity items requiring disposal, and initial accumulation must be in an approved five (5) gallon polyethylene safety can. Wherever halogenated and non-halogenated solvents are generated, two separate safety cans will be used. One will be designated “Halogenated Waste Solvents” and the other will be designated “Non-Halogenated Waste Solvents”. All five (5) gallon safety cans will bear a tag which will be filled in every time waste is emptied into it. Anyone emptying waste into a safety can must itemize the specific name of the waste and the exact amount (in milliliters) emptied into the can. The individual emptying into the can must also provide his/her name and the date the waste was added to the can. In addition, the room number and the building in which the can is located will also be on the tag.

When the five (5) gallon can is full, it will be brought to the appropriate waste disposal area and emptied into a Department of Transportation (DOT) approved waste drum. Halogenated waste will be emptied into the drum labeled "Halogenated Waste Solvents" and non-halogenated waste will be emptied into the drum labeled "Non-Halogenated Waste Solvents". The tag bearing the contents and the amounts will be given to the on-site coordinator.

4. Highly reactive chemicals, such as initiators and acid halides and anhydrides, isocyanates, etc., must be deactivated before they are added to the five (5) gallon safety cans in the individual generation areas. Amines should never be placed in the solvent safety can containing halogenated wastes. Separate containers will be provided.
5. Solid chemical waste should be brought to the collection sites, properly labeled and bearing the exact chemical identification of the contents. Collection points will not accept or process unidentified chemicals, and individual departments will be responsible for the cost of outside analysis.
6. Each collection point will have a separate drum for halogenated and non-halogenated solvents. Extreme care must be taken at the generation point to ensure these two classes are put into separate five (5) gallon safety cans.
7. Each collection point will have a separate drum for waste oils (e.g., vacuum pump oil, mineral oil, lubricating oil, etc). Do not put any PCB contaminated oil in this or any other drum. PCBs should be handled and stored separately. Separate containers will be provided if needed (contact the Department of Environmental and Occupational Health and Safety).
8. Acids can be poured into sinks that are equipped with acid neutralization tanks. This includes all sinks in Ward Beecher Hall, Cushwa Hall, and in the designated sinks in Moser Hall. No other sinks are suitable for this purpose.
9. Bases can be neutralized using a 1N hydrochloric acid solution. After testing with litmus or another suitable indicator to assure the solution is on the acid side of the pH scale, the solution can be dumped into a sink that is equipped with an acid neutralization tank.
10. All acid neutralization tanks will be inspected by an approved company to assure they are properly functioning. Waste from acid neutralization tanks will be treated as hazardous waste and properly disposed of as required by law if it is determined they are hazardous.
11. The Department of Environmental and Occupational Health and Safety will be responsible for the proper disposal of University hazardous or potentially hazardous waste. The director will work closely with the on-site coordinators and the faculty and staff in the Departments of Biological Sciences, Chemistry, Chemical Engineering, and all other areas where hazardous waste may be generated to assure the procedures set forth in this document are followed. It will be the responsibility of the Department of Environmental and Occupational Health and Safety to monitor and inspect all areas of the

University where hazardous waste is being generated and stored to assure these sites meet or exceed standards and regulations set forth by the EPA and the State of Ohio relative to chemical handling and waste disposal.

12. It will be the responsibility of the coordinator of Training and Development to provide appropriate training and documentation of such training for all University faculty and staff whose job description includes the handling of hazardous waste.
13. Any individual wishing information on any policy and/or procedure regarding the University's Hazardous Waste Contingency Plan should contact the Director of Environmental and Occupational Health and Safety.

AN OVERVIEW OF THE ELEMENTS OF THE RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act of 1976 [40 CFR] as amended 42 U.S. C. 6921, 90 STAT.2806, regulates the handling, storage, disposal, and transportation of 'hazardous waste' in the United States. This legislation went into effect on December 19, 1980 and is promulgated in Ohio by chapters 3734 and 3745 of the Ohio Revised Code. The Ohio Environmental Protection Agency (OEPA) has primacy for the enforcement of this legislation in the State of Ohio. There is no immunity from this legislation and all institutions and businesses, both public and private, are subject to its regulations.

Any person, or business (including universities) generating, transporting, treating, storing or disposing of "hazardous wastes" must notify the appropriate regional office of the United States Environmental Protection Agency (USEPA). By definition a "Solid Waste" includes any solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, agricultural operations or from community activities. A "Hazardous Waste" is a solid waste which:

1. Meets certain characteristics of a hazard (ignitable, corrosive, reactive, toxic).
2. Is listed as a waste from specific or nonspecific sources.
3. Is a listed commercial chemical product of a manufacturing intermediate that is sometimes discarded.

The regulations defining "hazardous waste" the characteristics, and the lists were published in the May 19, 1980 Federal Register (45 FR 33066-33588) and can be obtained from the Director of Environmental and Occupational Health and Safety.

A "Generator" is anyone whose act or process produces wastes which are determined to be hazardous by the above definition. If such waste is being produced, the generator is required to:

1. Obtain a USEPA identification number.
2. Maintain records.
3. Use appropriate containers and labels.
4. Furnish a chemical description of the waste to persons subsequently handling the waste.
5. Dispose of such waste in a designated facility that is permitted to accept such waste for treatment, storage, or disposal.
6. Initiate a manifest to track the movement of the waste off-site.

An exemption report must be filed with the EPA if the waste disposal facility designated to receive the waste fails to return the manifest to the generator within forty-five (45) days.

Testing of waste is not required to determine if it is hazardous. Federal regulations allow persons to declare their waste hazardous or nonhazardous based upon knowledge of the processes and materials used in the generation of the waste. However, a declaration that the waste is nonhazardous should be based on factors subject to objective review. If there is a significant change which indicates the waste has become hazardous, the evaluation should be repeated.

Generators of quantities of hazardous waste less than 100 kg/month are exempted from the requirements of the hazardous waste regulations. Although the general exemption is 100 kg/month, the exemption is as low as 1 kg/month for some acutely hazardous wastes. A detailed review of this provision is required before this exemption should be claimed.

The penalties for violation of RCRA may subject the company or individual to significant civil and/or criminal actions. Civil fines of up to \$25,000 per day per offense are provided. In addition, criminal fines and imprisonment are provided for anyone who knowingly:

1. Transports any identified or listed hazardous waste to a facility which does not have a permit.
2. Treats, stores or disposes of any identified or listed hazardous waste without obtaining a permit.
3. Makes any false statement to representation in any application label, manifest, record, report, permit or other document filed, maintained or used for purposes of compliance with regulations.

ELEMENTS TO CONSIDER IN A WASTE MANAGEMENT PLAN

In order to develop a comprehensive waste management plan which addresses all of the rules and regulations stipulated in RCRA, the following elements should be considered:

1. INVENTORY OF WASTES

Know the exact composition of the waste and the quantity being generated. Determine if it meets the definition of hazardous waste.

2. REVIEW HAZARDOUS WASTE DISPOSAL AND TRANSPORTATION PRACTICES

Since the “generator” of the waste is ultimately responsible for the proper disposal of that waste, it is imperative that the contractor hired to haul or transport the waste be thoroughly reviewed to determine that he or she is adhering to all of the rules and regulations of RCRA. Remember, the responsibility rests with the generator of the waste.

3. TREATMENT, STORAGE AND DISPOSAL FACILITIES

If hazardous waste is stored on site for ninety (90) days or more, the facility must apply for a license as a storage site. It is, therefore, imperative that all accumulated waste be transported off campus within this time frame so that the University does not fall into the category of a “hazardous waste storage facility”. All facilities contracted by the University to store waste generated on campus should be scrutinized to assure they are licensed and adhere to all criteria outlined in RCRA governing storage and disposal facilities.

4. MINIMIZATION OF WASTE VOLUME

Part of the requirement of RCRA is a generator of hazardous waste must document a plan to show a bona fide effort to reduce waste streams. Whenever possible, steps should be taken to use alternative methods which clearly reduce the amount of waste being generated on campus.

5. AUDITING AND RECORDKEEPING

RCRA mandates the complete and accurate records of waste handling, storage, generation, and shipping, as well as appropriate training be maintained.

6. SECURITY OF HAZARDOUS WASTE

The Chemical Management Center is a limited access facility equipped with security alarms and surveillance cameras. Keys are issued to a very few individuals. A copy of the waste hauler’s security plan is on file in the EOHS office.