



Program for the Management and Disposal of Hazardous Wastes from Construction and Renovation Sites

Table of Contents

- Purpose
- Definitions
- Responsibility
- Procedures
- References
- Appendix A - E

Purpose

New College of Florida (NCF) shall consistently strive to insure compliance with federal and state hazardous waste regulations through development of procedures, training, and understanding, for the need to protect the environment in which we live, work, and study. Under the federal Resource Conservation and Recovery Act (RCRA), New College is responsible for the hazardous waste generated by anyone who works, lives, and visits New College. This program is designed to help guide those who may generate that waste to manage it in a safe and legal manner.

The US EPA has determined that contractors and owners share joint and severable liability for hazardous waste generated by contractors working on primary sites (45 FR 72024, 72026 October 30, 1980). The Florida Department of Environmental Protection (DEP) has determined that regulated small and large quantity generators of hazardous waste are responsible for all hazardous wastes generated on their sites. Since the definition of generator is "any person, by site, whose act or process produces hazardous waste..." contractors working on the campus must comply with the same federal and state regulations pertaining to hazardous waste management and disposal as the College.

All contractors, sub-contractors, and their employees, intending to bid on projects and do work for New College of Florida, must comply with these procedures. Violations of State and Federal regulations could result in fines or civil and criminal action against the Contractor or the College. The following procedure has been developed to assist the Contractor and the College in meeting the requirements of the state and federal regulatory agencies.

Definitions

Solid Waste - For purposes of this program, a solid waste may be any solid, liquid, or containerized gas which no longer has an appropriate and legal intended use for the College. For a legal definition, refer to the Federal Solid Waste Disposal Act (SWDA).

Hazardous Waste - Any solid waste (as defined by the Federal Solid Waste Disposal Act) which possess hazardous characteristics, including flammability, corrosivity, reactivity, or toxic characteristics (TCLP) as defined by the Code of Federal Regulations (40 CFR 261).

Acutely Hazardous Waste - Wastes listed in 40 CFR 261.33(e) often referred to as the "P" Listed wastes.

Listed Hazardous Waste - Any chemical or product as listed in 40 CFR 261.31 - 261.33. Listed wastes are often referred to as "D", "F", "K", "U", and "P" wastes.

Flammable Characteristic Waste - Any waste with a flash point of less than 140F (60C). Common flammable materials include acetone, toluene, methanol, ethers, isopropanol, duplicating fluids, rubber cement glue, paint thinner or mineral spirits, oil based paints and stains, rubbing alcohol, nail polish remover, any aerosol containers such as spray paints and adhesives, and solvent-soaked rags.

Corrosive Characteristic Waste - Any liquid waste which has a pH of less than 2 (acidic) or greater than 12.5 (basic), or corrodes steel at a rate specified by EPA. Corrosive wastes may include, sulfuric acid, hydrochloric acid (muriatic acid), sodium hydroxide, drain openers (Drano) and products which contain strong acids or bases, which include many cleaning products.

Reactive Characteristic Waste - Any waste which is unstable, can readily undergo a violent change, reacts violently with water, is capable of detonation or explosive reaction, or contains sulfides or cyanides that have the potential for generating toxic fumes or vapors. Examples of reactive wastes include sodium and potassium metal, dry picric acid, compounds that form explosive peroxides, and cyanide plating operations.

Toxic Characteristic Waste (or TCLP) - a waste identified through an EPA method (Toxic Characteristic Leachate Procedure) that has the potential of forming a leachate that may cause groundwater contamination. If any product contains a constituent greater than a specified concentration as determined by the TCLP, it is a hazardous waste. Examples are products that contain benzene (many petroleum based products), cadmium (nickel cadmium batteries), lead (lead batteries and lead paints), silver (spent photofixer, silver nitrate), chromium, mercury (mercury batteries, fluorescent light tubes), etc.

Storage Area - Area in which hazardous wastes are temporally stored for up to 180 days while awaiting transport to a licensed disposal facility. This is a regulated area in which all containers must be labeled, dated, and inspected weekly.

Satellite Accumulation Area - A temporary storage and collection area of hazardous waste, *near the point of generation*, which is under direct control of the person or operator generating the waste. Waste in an approved satellite accumulation area is exempt from the 180 day time limit if other requirements are met. (NOTE: Subject to considerable interpretation and constraints by various regulators).

Small-Quantity Generator (SQG) - A generator of hazardous waste who generates between 100 kg and 1000 kg of waste (or less than 1 kg of acutely hazardous waste) in a calendar month. At no time can a SQG have greater than 6000 kg of hazardous waste in storage. The College is considered a small quantity generator.

Large-Quantity Generator (LOG) - A generator of hazardous waste who generates greater than 1000 kg (or greater than 1 kg of acutely hazardous waste) in a calendar month.

Responsibility

NCF shall take every precaution against hazards normally associated with handling and disposal of hazardous chemicals and wastes to avoid human and environmental exposure. The College is a *Small Quantity Generator* (EPA ID # **FLR 000 136 929**) of hazardous waste and is thereby required to comply with Federal and State regulations governing the management and disposal of hazardous wastes. These regulations mandate that the College determine if any given waste is hazardous, and if so, manage and dispose of that waste strictly in compliance with applicable standards.

The President of the College has the ultimate responsibility to insure that hazardous wastes and materials are properly managed. That responsibility has been delegated, via appropriate vice presidents, deans, and departmental chairs to insure that all users of hazardous materials properly manage hazardous wastes generated by their operations

Hazardous Materials in Construction and Demolition waste must be properly managed to avoid fines or environmental liability. Proper management includes identification, accumulation, and disposal. Identification and accumulation prior to disposal is the responsibility of the contractor or department performing the work however the liability for not doing this properly is shared by the College. Therefore, all project managers should be thoroughly aware of the following requirements. All disposal shall be through, coordinated by, or approved by Environmental Health and Safety.

Billing/Cost Recovery – Hazardous waste from construction projects is to be paid for by the College from construction funds. The contractor will make arrangements for the waste to be picked up or delivered to the Waste Management Facility. The building and project number should be clearly identified on the Chemical Waste Pickup Request form. EH&S will send a bill to Facilities Planning noting the specific project. If the terms of the contract indicate that the contractor is ultimately responsible for the cost of disposal of hazardous materials in construction debris, these costs may be billed to the contractor by the UF Project Manager or deducted from payments.

Procedures

Reference the New College of Florida Hazardous Waste Management Program for a comprehensive overview of the program.

Prior to commencement of all demolition and renovation projects, the contractor shall receive a site inspection report from the Project Manager identifying any potential building components of an environmental concern *within the scope of the renovation or demolition only*.

Prior to contracting for work, each contractor, subcontractor, and their employees, *who use hazardous materials and may generate a hazardous waste*, must provide evidence of having received RCRA Hazardous Waste Awareness Training, **and annual refresher training**, as required by 40 CFR 265.16 and 262.34.

Contractors and subcontractors shall identify all hazardous materials and maintain Material Safety Data Sheets (MSDS) for each product **on site** as required by the OSHA Hazard Communication Standard.

Contractors shall be responsible for estimating the type and quantity of hazardous waste that will be generated by all contractor employees and sub-contractors prior to start of a project.

The General Contractor shall be responsible for the proper identification, and management of all hazardous wastes within the scope of a given project. Specifically, contractors must identify a secure waste accumulation area, store waste in appropriate containers, identify the contents of the containers including the words HAZARDOUS WASTE, and inspect the containers on a weekly basis. The inspection must be documented.

The Contractor shall turn all properly identified hazardous waste over to the Office of Environmental Health and Safety, at the end of the project or other agreed upon time. Any other arrangements shall have prior written approval from the Office of Environmental Health and Safety and the Office of Facilities Planning.

HAZARDOUS WASTE shall not be removed from the campus by contractors or sub-contractors, unless prior arrangements have been made with the College and the waste is properly manifested and transported by a licensed hazardous waste transporter. (NOTE: Useable product is not considered a hazardous waste and is therefore excluded from this statement)

The Office of Environmental Health and Safety will verify the identification of the waste. If the identification is unacceptable, EH&S will not accept the waste and the contractor shall bear the cost of laboratory analysis for adequate identification.

All hazardous waste will be shipped off site using the College's hazardous waste contractor, under a manifest bearing the USEPA ID# of New College of Florida, and signed by an NCF EH&S representative, unless prior arrangements have been made and approved in writing by NCF Office of EH&S and Facilities Management.

All hazardous waste turned over to the College shall be contained in appropriate, compatible, and closed, containers for the type and volume of waste generated. Containers may include DOT approved 55 or 30 gallon open-head or closed-head drums, 5 gallon pails or cans, etc., or possibly the original container. The contractor shall be responsible for providing the appropriate container for all types of hazardous waste generated.

Paint brushes, rollers, rags, sludges, absorbent, etc. used with oil paints or solvents, that are considered waste materials shall be placed in 5 gallon sealable buckets, or other appropriate size containers and properly labeled with the contents and the words "Hazardous Waste" .

In no cases shall evaporation be used to dry solvent laden materials destined for disposal. Evaporation of waste solvents is considered illegal disposal of hazardous waste.

All hazardous waste must be stored in a secured, locked, and safe location. Incompatible waste (acids/bases/flammables) must be stored in physically separate locations. Hazardous waste storage locations shall be coordinated and approved by EH&S.

All hazardous waste containers must be closed at all times except when adding waste.

Fluorescent bulbs and ballasts shall be removed from all lighting fixtures prior to disposal.

a. **Lamps and HID light bulbs** – Fluorescent and high-intensity discharge (HID) bulbs must be managed as a Universal Waste. Other specialty bulbs which also may contain mercury must also be managed as a Universal Waste. All spent lamps, or the container which they are in, must be labeled clearly using the following phrases: "Universal Waste—Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)" and the date. Lamp may be placed in their original box or in 4' cardboard cylinders available from lamp recycling facilities. Protect lamps from breaking and the containers from moisture. Do not tape lamps. Each box must be labeled in accordance with FAC 62-737 and dated.

b. **Lamp ballasts** – All ballasts (PCB and non PCB) must be collected for disposal in appropriate containers. Appropriate containers include 5 gallon plastic buckets with

lids or 55 gallon steel drums with lids. Barrels must be labeled and closed during accumulation. 55 gallon barrels should not be filled more than half way due to the weight. PCB ballasts must be segregated from non PCB ballasts.

Mercury switches and thermostats – Mercury Containing Equipment – There are many types of equipment that contain elemental mercury. Before disposing of any of these types of equipment, you should verify that they do not contain mercury. Mercury containing devices should be handled with caution to prevent spillage. Devices should be handled intact, sealed, and packaged to prevent breakage. All used mercury containing equipment must be labeled clearly as “Universal Waste—Mercury Containing Equipment,” “Waste Mercury-Containing Equipment,” or “Used Mercury-Containing Equipment.”

Mercury Thermostats shall be labeled “Universal Waste—Mercury Thermostat(s),” “Waste Mercury Thermostat(s),” or “Used Mercury Thermostat(s).”

Examples include:

- Heating and air conditioning thermostats
- Tilt switches used in silent light switches,
- Pressure gauges, displacement/plunger relays
- Flow meters
- Float switches
- Drain traps in old buildings

Batteries – Storage batteries and other batteries which contain hazardous metals such as mercury, lead, silver and cadmium must be managed as universal Waste and properly recycled. All used batteries must be clearly labeled using the following phrases: “Universal Waste — Batteries”, “Waste Batteries” or “Used Batteries” during accumulation. Bagging small batteries in non conductive material will help prevent fires.

References

40 CFR 261 – 270
40 CFR 273.10 – 273.20 (Subpart B)
Florida Statutes, Chapter 403
Florida Administrative Code 62-730; 62-710; 62-737
NCF Hazardous Waste Management Program

Appendix A

EXAMPLES OF TRADES THAT MAY GENERATE HAZARDOUS WASTES

Demolition Contractors
Roofing Contractors
Painting Contractors
Carpet/Floor Finish Applications
Specialty Application Contractors
Plumbers

EXAMPLES OF HAZARDOUS WASTE THAT MAY BE GENERATED

Fluorescent and HID Light Tubes
PCB/non-PCB Ballasts
Lead-containing Paint
Mercury Containing devices (thermostats & controls)

Mineral Spirits
Toluene
Acetone
Oil based paints and stains
Paint Thinners
Aerosol cans (paints, cleaners, adhesives)
Roof Patch/tar
Carpet glue
PVC Primer and glue
Brushes, rollers, and rags used with oil based paint and solvents
Sludge from cleaning oil paints and equipment
Waste product from any container labeled flammable or combustible or that contain
"petroleum distillates" or chlorinated hydrocarbon compounds

Appendix B

SITE ASSESSMENT CHECKLIST FOR DEMOLITION AND RENOVATION PROJECTS

1. General Information

1.1 Building Information

NCF Building Number _____
Current Use of the Building _____
Occupied or Unoccupied _____

1.2. Type of Construction Project

Demolition	Yes	No
Renovation	Yes	No
New construction	Yes	No

If Demolition/Renovation, Specify Area or Scope.

1.3. Project Design By

Name of A/E Firm or UWF Project Manager _____

1.4 Site Assessment By

NCF EH&S _____
Environmental Consultant _____
Date _____

1.5 Site Construction

NCF Maintenance _____
Contractor Name _____

2. Site Inspection

2.1 Asbestos

- Asbestos Survey Conducted Yes No
- Is ACM Present? Yes No

If yes, must be abated prior to demolition/renovation

2.2 Lead Based Paint

- | | | |
|-------------------------------------|-----|----|
| • Lead-Based Paint Survey Conducted | Yes | No |
| • Lead-Based Paint Present | Yes | No |

If yes, work practices and disposal issues must be evaluated.

2.3 Lead Containing Building Materials

- | | | |
|--|-----|----|
| • Are other lead containing products present | Yes | No |
| • Roof Flashing | Yes | No |
| • Plumbing | Yes | No |
| • Lead Plaster | Yes | No |
| • Batteries | Yes | No |
| • other _____ | | |
-

If yes, must be handled and disposed properly

2.4 PCB

- | | | |
|--|-----|----|
| • Are known PCB containing products present? | Yes | No |
| • light ballasts | Yes | No |
| • capacitors | Yes | No |
| • transformers | Yes | No |
| • other _____ | | |
-

If yes, must be handled and disposed of properly.

2.5 Mercury Containing Devices

- | | | |
|---------------------|-----|----|
| • Fluorescent Lamps | Yes | No |
| • HID Lamps | Yes | No |
| • Thermostats | Yes | No |
| • Switches | Yes | No |
| • Other _____ | Yes | No |

2.6 Radioactive Materials

- | | | |
|--|-----|----|
| • Tritium EXIT Signs | Yes | No |
| • Other Tritium devices | Yes | No |
| • Radioactive sources (laboratories/instrumentation) | Yes | No |

If yes, contact EH&S.

2.7 Fume Hoods

- | | | |
|----------------------------|-----|----|
| • Are Fume Hoods present? | Yes | No |
| • If yes, what type? _____ | | |
| • Do they contain ACM? | Yes | No |

- Have contents been removed? Yes No

2.8 Solvents/Paints/Flammable Materials

- Are solvents/paints stored in the area Yes No
- If yes, they must be relocated or addressed.

2.9 Underground/Aboveground Storage Tanks

- Are UST's,/AST's located on site? Yes No
- If yes, describe. _____

3.0 CFC's/Refrigerants

- Does the site contain any refrigeration equipment? Yes No
- List _____
- _____
- _____

If yes, freons must be recovered/recycled by qualified individual.

3.1 Miscellaneous Hazardous Material/Waste

Identify if any of the following are present

- | | | |
|------------------------------|-----|----|
| a) Batteries | Yes | No |
| b) Adhesive glues/removers | Yes | No |
| c) Pressurized gas cylinders | Yes | No |
| d) Poisons | Yes | No |
| e) Oxidizers | Yes | No |
| f) Flammable Materials | Yes | No |
| g) Aerosol Cans | Yes | No |
| h) Other | | |
- _____
- _____

Appendix D

CONTRACTOR'S CERTIFICATION
(Hazardous Waste Turned over to the College)

This certification shall accompany each completed Uniform Hazardous Waste Manifest submitted to the NCF Office of Environmental Health and Safety. This is required to obtain the "Generator's" signature.

CERTIFICATION: By means of this certification, the Contractor hereby declares that the content of this consignment are fully and accurately described in the attached description or label including the wording "Hazardous Waste", contents, volumes, weights, and percent composition, as applicable.

I certify that I have made a good faith effort to minimize my waste generation.

Contract BR#/Name/or Other ID _____

Contractor's Signature _____ Date _____

Contractor's Name (Printed) _____ Date _____

Title or Position of Signatory _____

Appendix E

RCRA in Focus



Hazardous Waste
from Construction Site