

UNIVERSITY OF WEST FLORIDA

**PROCEDURES TO IDENTIFY
AND
MANAGE**

**ENVIRONMENTAL ISSUES DURING
DEMOLITION, RENOVATION AND NEW
CONSTRUCTION PROJECTS**



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PROCEDURES TO IDENTIFY AND MANAGE ENVIRONMENTAL ISSUES DURING DEMOLITION, RENOVATION AND NEW CONSTRUCTION PROJECTS AT THE UNIVERSITY OF WEST FLORIDA

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Summary of PROCEDURES TO IDENTIFY AND MANAGE ENVIRONMENTAL ISSUES DURING DEMOLITION, RENOVATION, AND NEW CONSTRUCTION PROJECTS AT THE UNIVERSITY OF WEST FLORIDA

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. Therefore, contractors working on the campus must comply with the same federal and state regulations pertaining to hazardous waste management and disposal as the University.

All contractors, sub-contractors, and their employees, intending to bid on projects and do work for the University of West Florida, must comply with these procedures as summarized. A complete copy of the procedures may be obtained by contacting one of the Departments listed at the end of this summary. Violations of State and Federal regulations could result in fines or civil and criminal action against the Contractor or the University. The following guidelines have been developed to assist the Contractor and the University in meeting the requirements of the state and federal regulatory agencies.

1. Prior to commencement of all demolition and renovation projects, the contractor shall receive a site inspection report from the Office of Environmental Health and Safety (EH&S), A/E, Environmental Consultant, or Project Manager identifying any potential building components of an environmental concern *within the scope of the renovation or demolition only.* {3.6.1}
2. 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. {3.7.3}
3. 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. {3.6.2 and 3.7.3}
4. 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. {3.6.2}
5. 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. {2.1}
6. The Contractor shall turn all properly identified hazardous waste over to the University, 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. {3.3.4}
7. **HAZARDOUS WASTE shall not be removed from the campus by contractors or sub-contractors, unless prior arrangements have been made with the University and the waste is properly manifested and transported by a licensed hazardous waste transporter.** {3.3.5}

8. 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. {3.3.6}
9. All hazardous waste will be shipped off site using the University's hazardous waste contractor, under a manifest bearing the USEPA ID# of the University of West Florida, and signed by a University EH&S representative, unless prior arraignments have been made and approved in writing by UWF Office of EH&S and Facilities Planning. {3.15.5}
10. All hazardous waste turned over to the University 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. {3.12.3}
11. Paint brushes, rollers, rags, sludges, absorbent, etc. used with oil paints or solvents, and that are waste materials shall be placed in 5 gallon sealable buckets, or other appropriate size containers. {3.3.7}
12. 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. {3.3.7}
13. 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. {3.8.1}
14. All hazardous waste containers must be closed at all times except when adding waste. {3.3.7}
15. Fluorescent bulbs and ballasts shall be removed from all lighting fixtures prior to disposal.
 - a. Fluorescent bulbs shall be placed in appropriate size tube cartons from original cartons or available from bulb recycling facilities. Do not break bulbs. Do not tape bulbs. Broken bulbs must be placed in sealed containers and handled separately. Each box must be labeled in accordance with FAC 62-737 and dated. {3.14.3}
 - b. Ballasts shall be separated into PCB and non-PCB categories and placed into separate 55 gallon (or appropriate smaller size) open-head steel DOT drum. Each drum must be labeled with appropriate labels: "PCB Ballasts for Recycling" or "Non-PCB Ballasts for Recycling". {3.14.4}
16. The Contractor shall be charged by the University for all hazardous waste based on the current contract rates with the University's Hazardous Waste Contractor. {3.3.9}

The General Contractor and Sub-Contractors shall agree to all requirements as specified in the document entitled PROCEDURES TO IDENTIFY AND MANAGE ENVIRONMENTAL ISSUES DURING DEMOLITION, RENOVATION, AND NEW CONSTRUCTION PROJECTS AT THE UNIVERSITY OF WEST FLORIDA.

For a copy of PROCEDURES TO IDENTIFY AND MANAGE ENVIRONMENTAL ISSUES DURING DEMOLITION, RENOVATION, AND NEW CONSTRUCTION PROJECTS AT THE UNIVERSITY OF WEST FLORIDA, or if you have questions concerning this information, please contact one of the following:

Mr. Ron Hambrick, Director of Environmental Health and Safety -- (850) 474-2177
Mr. Dave Luttrell, Director of Facilities Planning -- (850) 474-2938
Ms. Elaine Smith, Assistant Purchasing Director -- (850) 474-2627

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.

HAZARDOUS WASTE DISPOSAL COSTS for Contractor Generated Hazardous Wastes

General contractors will be invoiced for hazardous waste generated by construction activities, including activities by sub-contractors, on their projects. All costs will be based on the University's most current contract prices with our licensed hazardous waste transporter and -TSD facility. Prices below reflect the maximum price for disposal of most construction related hazardous materials. In most cases, the actual charge will be less. Actual costs will be determined by packing methods after other "compatible" materials are included. (NOTE: These categories only reflect examples of types of waste, containers, and packing methods. Actual charges will be based on material identity, compatibility, properties, container type and sizes, etc.)

1. Flammable, combustible or latex paints, solvents, etc.
{Examples: roofing patch, acetone, toluene, paint stripper, solvent-based cleaners, oil based paint/stain, mineral spirits}

1 gallon (or less in 5 gallon overpack)	\$105 ea
5 gallons (DOT approved container)	\$105 ea
5 gallons (in 20 gallon over pack)	\$225 ea
5 gallon (overpack)	\$105 ea
10 gallon (overpack)	\$120 ea
20 gallon overpack	\$225 ea
30 gallon (overpack)	\$310 ea
38 gallon AETS PLC, DOT115 Container	\$380 ea
55 gallon (overpack)	\$525 ea

2. 1-tube (or less) of caulking \$105 ea
(For other container sizes, See #1)

3. Bulk Liquids(non-blendable- e.g mineral spirits w/paint residue)
(In DOT Approved Containers)

5 gallon	\$120 ea
10 gallon	\$230 ea
20 gallon	\$250 ea
30 gallon	\$265 ea
55 gallon	\$337 ea

4. Corrosives (Acids or bases)

See #3

5. Aerosol Cans (in DOT approved Drums)

5 gallon	\$125 ea
10 gallon	\$240 ea
20 gallon	\$255 ea
30 gallon	\$300 ea
55 gallon	\$545 ea

6. Fluorescent or HID Bulbs
(Properly boxed and stored)

4' or less straight tubes	\$0.262 ea
4' or greater straight tubes	\$0.30 ea
Compact fluorescent tubes	\$0.30 ea
HID Lamps	\$0.85 ea
U-tubes or other irregular shaped bulbs	\$0.26 ea
Shatter shields	\$0.80 ea
Broken Tubes	\$0.35 ea

7. PCB Ballasts (in DOT approved containers) \$0.65 /lb
Non-PCB Ballasts (in DOT approved containers) \$0.55 /lb

Disposal costs for materials not conforming to these categories or properties will be will be obtained upon request.

INTRODUCTION

During renovation, demolition and new construction projects, the Owner (University of West Florida - UWF) is responsible for ensuring that environmental issues affecting such projects, including hazardous waste issues, are handled in compliance with applicable regulations. To meet this obligation UWF requires performance of environmental site inspections prior to beginning building renovation, demolition, or new construction on all contracts awarded after December 1, 1997. Environmental issues identified during this pre-construction assessment are then addressed by either the UWF Office of Environmental Health and Safety, or by procurement of outside environmental consulting.

Contractors performing environmental remediation and traditional construction work on the University property handle hazardous materials on a regular basis. Since UWF may be responsible for hazardous materials brought onto and removed from the University property, contractors performing work are required to properly monitor, handle, transport and dispose of these hazardous materials in accordance with University procedures and Federal and State regulations. To ensure contractor compliance with hazardous material management practices, all construction contracts between the Owner and the Contractor incorporate specific language to contractually obligate contractors to properly manage these materials. This language is incorporated into each standard construction contract in the General Conditions for Handling of Hazardous Materials.

Two options are available for the disposal of hazardous waste: (1) The contractor may turn all hazardous waste generated from a project over to the University and pay direct cost of disposal to the University; or (2) the Contractor may, upon prior approval of the University, sub-contract with a licensed hazardous waste contractor to package and transport the waste to an EPA approved hazardous waste TSD facility following strict guidelines included in this specification and Federal and State regulations. ***The preferable method is to turn properly identified and contained waste over to the University.***

This document contains requirements for a pre-construction environmental site inspection, and contract provisions for modification of the construction contract. A flow chart (Figure 1) on the following page outlines general steps that should be followed by UWF Project Managers when performing a construction project.

This document includes the following exhibits:

- Exhibit A Site Inspection for Demolition and Renovation Projects: Exhibit includes the purpose of the site inspection, applicability and scope of work for site inspection, and a site assessment checklist as Appendix A.

- Exhibit B General Conditions for Handling of Hazardous Materials: Exhibit B provides Contractors general guidance for management of hazardous materials.

NOTE TO THE ARCHITECT: Include Exhibit B in the General Conditions of the Contract for Construction.

FIGURE 1

FLOW CHART FOR CONSTRUCTION PROJECTS TO MANAGE HAZARDOUS MATERIALS

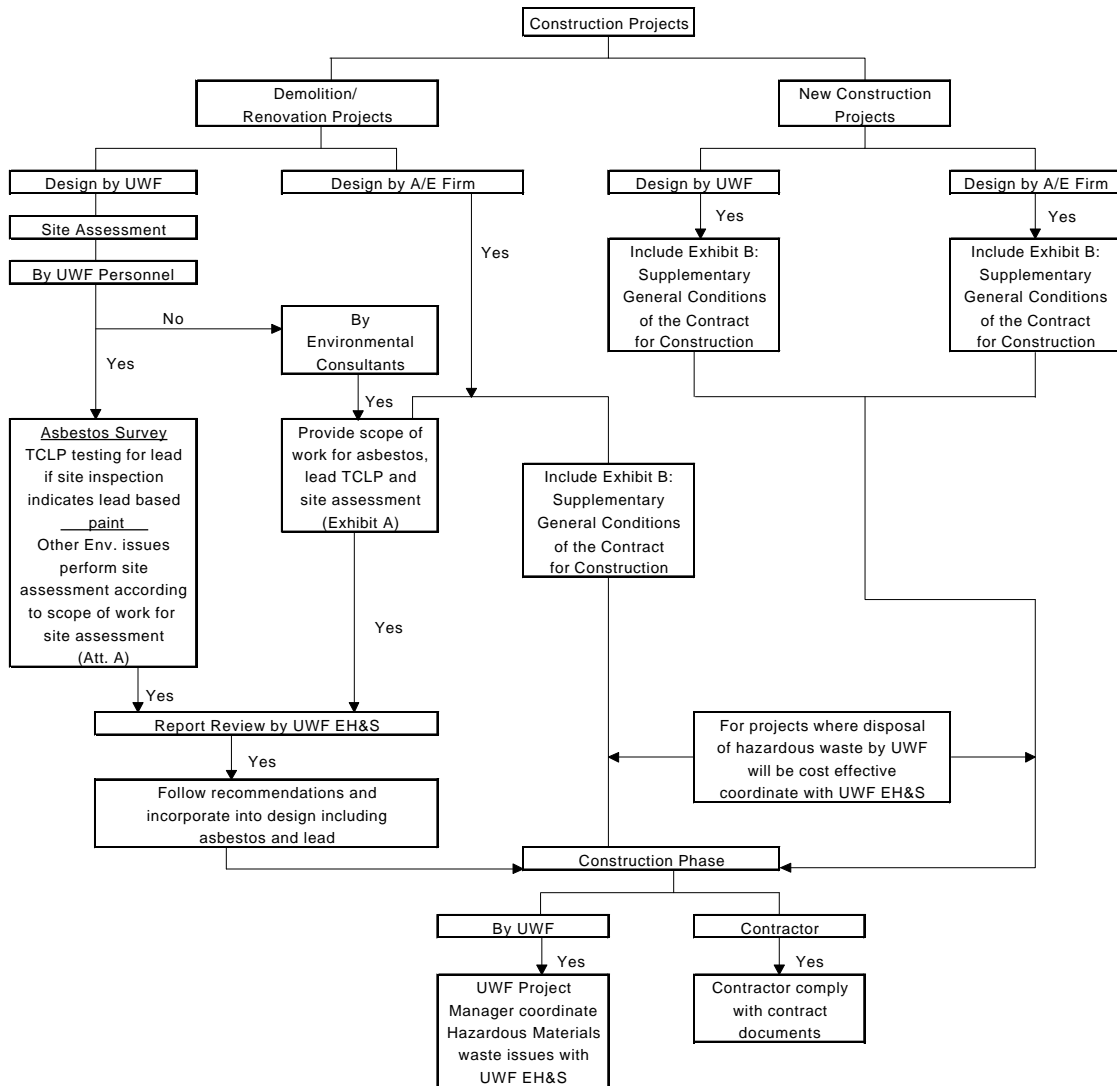


Exhibit A

SITE INSPECTION FOR DEMOLITION AND RENOVATION PROJECTS

SITE INSPECTION FOR DEMOLITION AND RENOVATION PROJECTS

Applicability

A site inspection will be performed during pre-design phase of all demolition and demolition/renovation projects on the UWF campus. The inspection can be performed by appropriately trained UWF personnel when coordinated with the Office of Environmental Health & Safety (EH&S) and/or appropriately trained outside environmental consultants (licensed if required). The scope of work, outlined below can be used as a guideline to perform such inspections or can be used as part of the request for proposal for the environmental consultant and/or Architect/Engineer (Designer).

Purpose and Scope of Site Inspection

Perform an environmental assessment of the structure (building) to be demolished or the part of the building which will be renovated to address any potential on-site environmental liabilities associated with waste generation, handling, storage and disposal activities. Site inspection, interviews, record reviews and report preparation shall be performed by an environmental professional possessing sufficient training and experience or UWF Environmental Health and Safety personnel as appropriate. The report shall be reviewed by UWF EH&S. The tasks to be performed include but are not limited to the following:

- To identify the presence or likely presence of any hazardous substances or other environmental issues at the demolition/renovation site.
- To conduct additional investigations or tests to determine whether solid waste material is hazardous waste or not.
- To inform the contractor and University personnel of pertinent findings which may affect its work.

Records Review

The purpose of the records review is to obtain and review records that will help identify the potential environmental issues at the project site.

Pertinent records shall be reviewed to determine past or present use or storage of asbestos-containing material (ACM), lead-based paint (LBP), lead-containing building components, PCBs in transformers/capacitors, mercury-containing light devices, underground or above ground storage tanks, equipment containing hydraulic fluids, equipment containing refrigerants, photographic equipment, radioactive material or biological hazards.

Available records to be reviewed include the following:

1. As-built and renovation drawings
2. Asbestos records
3. Lead paint records
4. Hazardous waste records
5. Material Safety Data sheets (MSDS)
6. Other pertinent available records
7. Past/Present use of facility (i.e. clinical or research laboratory, chemical manufacturing, etc.)

Interviews

The objective of interviews is to obtain information from persons concerning knowledge of environmental issues of the project site. Interview with project manager, building occupants, building maintenance personnel, EH&S personnel and others to obtain information outlined in the checklist and questionnaire.

Evaluation and Report

Summarize findings of the inspection and conclusions of the impact of recognized environmental conditions in connection with the renovation/demolition project, and provide recommendations to resolve potential environmental / hazardous waste issues which may be encountered during the upcoming project.

Review of Inspection Report

The inspection report shall be reviewed by UWF EH&S prior to the bidding phase of the project.

Appendix A

SITE ASSESSMENT CHECKLIST FOR DEMOLITION AND RENOVATION PROJECTS

SITE ASSESSMENT CHECKLIST FOR DEMOLITION AND RENOVATION PROJECTS

1. General Information

1.1 Building Information

UWF 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

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

UWF EH&S _____

Environmental Consultant _____

Date _____

1.5 Site Construction

UWF 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 Paint Survey Conducted yes no
 - Lead 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 _____

2.6 Fume Hoods

- Are Fume Hoods present? yes no
- If yes, what type? _____
- Do they contain ACM? yes no
- Have contents been removed? yes no

2.7 Solvents/Paints/Flammable Materials

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

2.8 Underground/Aboveground Storage Tanks

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

2.9 CFC's/Refrigerants

- Does the site contain any refrigeration equipment? yes no
List _____

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

2.10 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 | | |
- _____
- _____

EXHIBIT B

GENERAL CONDITIONS FOR HANDLING OF HAZARDOUS MATERIALS

**GENERAL CONDITIONS
FOR HANDLING OF HAZARDOUS MATERIALS**

ARTICLE 1 BASIC DEFINITIONS

1.1 HAZARDOUS MATERIAL. The term "Hazardous Materials" shall include hazardous substances and hazardous wastes as follows:

1.1.1 A hazardous substance shall include the following:

(a) Listed hazardous substances. The elements and compounds and hazardous wastes appearing in 40 CFR Part 302, Table 302.4.

(b) Unlisted hazardous substances. A solid waste, as defined in 40 CFR 261.2, which is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b), is a hazardous substance if it exhibits any of the characteristics identified in 40 CFR 261.20 through 261.24.

1.1.2 A hazardous waste is defined as a waste that:

(a) Causes, or significantly contributes to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(b) Poses a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed.

These wastes can either be specifically listed in 40 CFR 261 Subpart D, or they may meet any of four hazardous waste characteristics: Ignitable (flash point less than 60°C/140°F; Corrosive (pH less than 2.0 or greater than 12.5); Toxic (TCLP extract exceeds regulatory limits in 40 CFR 261.24); Reactive (unstable, reacts violent or capable of detonation.)

ARTICLE 2 HANDLING OF HAZARDOUS MATERIAL

2.1 The Contractor shall be responsible to The University of West Florida for proper handling, storage and disposal of any Hazardous Materials identified in the Contract Documents to be within the scope of the Work, any Hazardous Materials brought to the Project site by the Contractor or anyone for whom the Contractor is responsible, and any Hazardous Materials generated by the Contractor or anyone for whom the Contractor is responsible.

2.2 If the Contractor performs any Work knowing or having reason to know that it is contrary to laws or regulations governing the handling, storage and disposal of Hazardous Materials, the Contractor shall bear all claims, costs, fines, penalties, losses and damages caused by, arising out of or resulting therefrom; however, it shall not be the Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with laws and regulations. If the Contractor observes that portions of the Contract Documents

are at variance therewith, the Contractor shall promptly notify the Architect/Engineer and Owner in writing, and necessary changes shall be accomplished by appropriate modification.

ARTICLE 3 PROTECTION OF PERSONS AND PROPERTY

3.1 SAFETY PRECAUTIONS AND PROGRAMS. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

3.2 SAFETY OF PERSONS AND PROPERTY.

3.2.1 The Owner shall be responsible for any asbestos, PCBs, petroleum, Hazardous Material or radioactive material uncovered or revealed at the site which was not shown or indicated in Drawings or Specifications or identified in the contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. The Owner shall not be responsible for any such materials brought to the site by the Contractor, Subcontractor, Suppliers or anyone else for whom the Contractor is responsible. Refer to Paragraph 2.1 for requirements concerning hazardous materials brought on-site or otherwise generated by the Contractor.

3.2.2 The Contractor shall immediately: (1) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency) and (2) notify the Owner and the Architect/Engineer (and thereafter confirm such notice in writing). The Owner shall promptly consult with the Architect/Engineer concerning the necessity for the Owner to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any. The Contractor shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after the Owner has obtained any required permits related thereto and delivered to Contractor special written notice: (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely. If the Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Sum or Contract Time as a result of such Work stoppage or such special conditions under which Work is agreed by the Contractor to be resumed, either party may make a claim therefore as provided in the Contract Documents.

3.2.3. If after receipt of such special written notice the Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then the Owner may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If the Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Sum or

Contract Time as a result of deleting such portion of the Work, then either party may make a claim therefore as provided in the Contract Documents. Owner may have such deleted portion of the Work performed by Owner's own forces or others.

3.3. Purpose

- 3.3.1 General: The University of West Florida (UWF) Main Campus is classified by the EPA as a "small quantity generator" of hazardous waste. As a result of this classification, UWF must comply with stringent regulations in regard to hazardous waste handling, storage, disposal, and personnel training. Regulations also require UWF to take steps to reduce the amount of hazardous waste it generates. The purpose of this Section is to define minimum requirements to be followed by the Contractor for hazardous waste characterization and disposal, waste minimization, personnel training, and notifications.
- 3.3.2 Scope: This Section outlines procedures necessary for handling small quantities of hazardous waste generated by the Contractor during the Work, or hazardous waste generated incidental to the Work, and basic pollution prevention requirements.
- 3.3.3 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.
- 3.3.4 The Contractor shall turn all properly identified hazardous waste over to the University, 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.
- 3.3.5 HAZARDOUS WASTE shall not be removed from the campus by contractors or sub-contractors, unless prior arrangements have been made with the University, and the waste is properly manifested and transported by a licensed hazardous waste transporter.
- 3.3.6 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.
- 3.3.7 Paint brushes, rollers, rags, sludges, absorbent, etc. used with oil paints or solvents, and that are waste materials shall be placed in 5 gallon sealable buckets, or other appropriate size containers. 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 containers must be closed at all times except when adding waste.

3.3.8 Intent of Hazardous Waste Disposal: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, the Contractor shall be responsible for performing: waste characterization; waste packaging; completion of the Uniform Hazardous Waste Manifest; transportation; and disposal. The Contractor shall furnish all labor, equipment, materials, worker training, analytical services, transportation and disposal, and is responsible for costs, fees, licenses and permits related to handling these hazardous wastes.

3.3.9 Limitations: Projects that result in generation of 55-gallons or greater of hazardous waste or one (1) quart of acutely hazardous waste will require review by UWF's Office of Environmental Health and Safety to determine if this Section remains applicable to the Work. For all projects, the contractor shall make arrangements with UWF Office of EH&S to collect, temporarily store, and dispose of the waste. Contractors shall be responsible for all costs incurred for hazardous waste disposal. Method of payment shall be determined at the pre-bid conference.

3.4 Applicable Regulations and Publications: In order to prevent and provide for the control of any environmental pollution or damage arising from the construction activities of the contractor in the performance of this Contract, all applicable federal, state, and local laws and regulations concerning environmental pollution control and abatement, as well as the specific requirements stated elsewhere in the Contract Documents, shall be complied with. The Contractor shall be familiar with applicable codes and regulations if it generates, manages, transports, or disposes of hazardous wastes. Following is a listing of applicable regulations. The most recent issue of each rule, code, or regulation shall govern. Where conflict exists among various requirements or with these specifications, the more stringent requirements shall apply.

3.4.1 TITLE 29, CODE OF FEDERAL REGULATIONS, U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.

Part 1910.20 Access to Employee Exposure and Medical Records
Part 1910.120 Hazardous waste operations and emergency response
Part 1910.134 Respiratory Protection
Part 1926.21 Safety Training and Education
Part 1926.59 Hazard Communication

3.4.2 TITLE 40, CODE OF FEDERAL REGULATIONS, U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) STANDARDS.

Part 50 National Primary and Secondary Ambient Air Quality Standards
Part 260 Hazardous Waste Management Systems - General
Part 261 Identification and Listing of Hazardous Waste
Part 262 Generators of Hazardous Waste

- Part 263 Transporters of Hazardous Waste
- Part 265 Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
- Part 268 Land Disposal Restrictions
- Part 279 Standards for the management of used oil
- Part 761 Polychlorinated biphenyls (PCBS)

3.4.3 TITLE 49, CODE OF FEDERAL REGULATIONS, U.S. DEPARTMENT OF TRANSPORTATION (DOT) STANDARDS

- Part 171 Hazardous Substances
- Part 172 Hazardous Materials Tables and Hazardous Subparts B & C Materials Communications Regulations
- Part 173 Shippers - General Requirements for Shipments and Packaging
- Part 178 Specifications for packaging

3.4.4 STATE OF FLORIDA:

Florida Administrative Code Rule 62-730, Hazardous Waste.

Florida Statutes Section 403, Chapter 93-207 Section 55, Environmentally Sound Management of Mercury-Containing Devices and Lamps.

Florida Administrative Code Rule 62-710, Used Oil Management

Florida Administrative Code Rule 62-737, Management of Spent Mercury-Containing Lamps and Devices Destined for Recycling.

3.5 Permits And State Licenses

- 3.5.1 If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, the Contractor shall be responsible for obtaining necessary permits, state licenses, and certifications of personnel in conjunction with hazardous waste removal, hauling, and disposal and shall provide timely notification of such actions as may be required by Federal, State, regional, and local authorities. Fees and/or charges for these licenses, permits and notifications shall be paid by the Contractor.

3.6 Pre-Work Inspection

- 3.6.1 Pre-Work Inspection: Prior to commencement of work, request from UWF Project Manager information on a site specific environmental building assessment. Inspect areas where the Work will be performed to determine if hazardous materials or hazardous waste will be impacted.
- 3.6.2 Contractor's Materials: The Contractor shall estimate the quantity and types of hazardous wastes that will be generated due to Contractor's materials and operations. As a submittal, provide a table that lists each material to be brought on-site, material quantity, and attach a copy of the MSDS for each material listed.

3.6.3 Pre-Work Notification: Notify UWF Office of Environmental Health and Safety and provide an estimate of the quantity of hazardous wastes that will be generated, and description on how wastes will be managed (stored, transported, recycled, reclaimed, disposed) prior to commencement of work.

3.7 Contractor's Responsibility for Protection of Human Health and the Environment

3.7.1 General Requirements: The Contractor shall be responsible for the safety and protection of its workers, the public and the environment from hazards created by the construction operations.

3.7.2 Protection of Water Resources: The Contractor shall not take any action which will adversely affect the existing Water Quality Standards of any waters of the State (ground water and surface water runoff), or which would otherwise contribute to pollution of these water resources. No fuel oils, bitumens, calcium chloride, acids, paints, construction wastes or otherwise harmful materials shall be permitted to enter these waters.

3.7.3 Personnel Training: All Contractor's employees (including Subcontractor and Sub-Subcontractor) exposed to or otherwise working with hazardous substances and health hazards, and their supervisors and management responsible for the site, shall receive training required under EPA regulation 40 CFR 265.16 and applicable OSHA regulations prior to the start of the Project. Affected employees, supervisors and management shall complete and submit the "RCRA Required Hazardous Waste Awareness and Handling Training" form or certificate of course completion. The Contractor shall maintain on-site a copy of all applicable training certificates, and shall supply copies to the UWF Office of Environmental Health and Safety.

3.8 Security

3.8.1 Contractors that generate and store hazardous materials or hazardous wastes on UWF property shall ensure the secure storage of these materials, and prevent unauthorized persons from access to these materials. Hazardous materials and hazardous waste shall be stored in sealed and properly labeled containers, removed from physical damage, and physically locked in a secure area.

3.9 Submittals

3.9.1 Pre-Work Submittal:

3.9.1.1 RCRA required Hazardous Waste Awareness and Handling Training form (see Appendix) or certificate of training.

3.9.1.2 Provide statement affirming that Contractor has developed and implemented a Health and Safety Plan, Hazard Communication

Program Contingency Plan and site specific Emergency Response Plan as required by applicable OSHA regulations, and that all the Contractor's Employees and anyone for whom the Contractor is responsible are familiar with the documents to the extent necessary to perform their specific tasks.

3.9.1.3 Inventory of chemicals or other hazardous materials to be brought on-site by the Contractor, and MSDS sheets for each substance listed.

3.9.1.4 If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, provide proof of *Hazardous Waste Contractor* U.S, EPA Identification Number for transportation, and disposal of hazardous waste (refer to 40 CFR 262.12),

3.9.2 During-Work Submittal:

3.9.2.1 Special Reports (See 3.11):

a.) Accident Reports; i.e. accidents, spills, etc.

b.) Report Discovered Conditions; i.e. leaking containers, etc.

3.9.2.2 Analysis report for waste sampling.

3.9.2.3 Contractor certification for hazardous waste disposal, if the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University.

3.9.3 Post-Work Submittal: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, the Contractor shall furnish:

3.9.3.1 Receipts from the landfill operator that acknowledge the Contractor's delivery(s) of material.

3.9.3.2 Copy of all hazardous waste manifests used for shipment of hazardous wastes.

3.10 Recordkeeping

3.10.1 EPA Record Requirements: Maintain all records related to hazardous waste generation, testing, transportation and recycling or disposal, for a period of 3 years in accordance with EPA regulation 40 CFR 262.40.

3.10.2 OSHA Record Requirements: Maintain all personnel medical surveillance records in accordance with OSHA regulation 29 CFR 1910.120 (f), if applicable.

3.11 Special Reports

- 3.11.1 Accident Reports: When an accident, personal injury or an event of unusual and significant nature occurs at site, the Contractor shall prepare and submit a special report listing the chain of events, persons participating, response by the Contractors personnel, and similar pertinent information.
- 3.11.2 Report Discovered Conditions: When hazardous conditions, hazardous materials or hazardous wastes are unexpectedly uncovered during the work, the Contractor shall stop all Work in connection with such hazardous conditions and immediately notify UWF Office of Environmental Health and Safety and the Architect/Engineer. Within 24 hours the Contractor shall submit a report indicating the condition discovered and details of the actions taken.

3.12 Hazardous Waste Accumulation

- 3.12.1 General: Generators of hazardous waste may accumulate at or near any point of generation up to 55-gallons of hazardous waste or one (1) quart of acutely hazardous waste. This area will be a "satellite accumulation 2.34(c). Unless prior arrangements have been made, EH&S should be contacted for collection of the waste.
- 3.12.2 Approval for Accumulation and Storage of Hazardous Waste: Prior to accumulation and storage of hazardous waste on UWF property the Contractor must obtain from UWF written approval for conditions of storage proposed.
- 3.12.3 Conditions of Waste Accumulation: All containers shall be marked with the words "HAZARDOUS WASTE" and the contents. Once the 55-gallon or one quart limits of acutely hazardous waste have been reached, the waste must be transferred to off-site permitted treatment, storage or disposal facility within three (3) days. The Contractor may accumulate waste on-site provided it is in accordance with 40 CFR 262.34(a).
- 3.12.4 Storage and shipping containers shall be both airtight and watertight and conform to DOT Standard 49 CFR 178.224. Each container shall be constructed of fiber, hard plastic, or metal, as appropriate for the waste contained, and provided with locking lids.
- 3.12.5 Time: The date and time when accumulation began, and the date and time when the container was filled and sealed, shall be marked on each waste container.
- 3.12.6 Prior to UWF EH&S collecting the waste from the Contractor, the Contractor shall complete the Contractor Certification Form (FORM II) attesting to the contents and label information.

3.13 Waste Characterization

3.13.1 Solid Waste Characterization: If unable to characterize waste using product knowledge in accordance with 40 CFR 262.11(c)(2), solid wastes shall be sampled and submitted for testing by the Contractor to determine if the waste is hazardous in accordance with 40 CFR 261. The Contractor shall provide one copy of any material analysis report to the UWF Office of Environmental Health & Safety.

3.13.2 Sampling Requirements: Any waste sample collection performed for waste characterization analysis must be witnessed by UWF Office of Environmental Health and Safety or the Owner's Representative.

3.13.3 Notification: Based on the results of waste characterization testing, the Contractor shall prepare a written notification and certifications, in accordance with 40 CFR 268.7(a)(1) and (2), for submittal to the appropriate treatment, storage, or disposal facility to which the waste will be shipped. If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, notification and certifications, as defined above, shall accompany each shipment of hazardous waste and shall include as a minimum:

- EPA Hazardous Waste Number
- Waste constituents Treater will monitor
- Waste analysis data, where available
- Manifest number associated with the waste shipment

3.14 Special Waste Recycling or Reclamation

3.14.1 General: Where possible, all hazardous materials and hazardous wastes shall be sent to a State approved recycler or reclamation center. Materials that shall be recycled include but are not limited to the following: used oil, freon, mercury, lead, lighting ballasts, and solvents.

3.14.2 Used Oil: Used oil and oil filters shall be managed and recycled in accordance with FAC 62-710.

3.14.3 Mercury: Fluorescent lighting tubes, high intensity discharge (HID) lighting, thermostat switches, and batteries may contain mercury. Should the Contractor's Work include demolition of lighting fixtures or generation of spent mercury containing devices, the Contractor shall remove bulbs and devices undamaged and turn them over to the University. Fluorescent bulbs shall be placed in appropriate size tube cartons from original cartons or available from bulb recycling facilities. Do not break bulbs. Do not tape bulbs. Broken bulbs must be placed in sealed containers and handled separately. Each box must be labeled in accordance with FAC 62-737 and dated. If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior

approval has been obtained from the University, generators and transporters of mercury containing devices shall comply with provisions of the FAC 62-737.

3.14.4 Ballasts: Lighting ballasts removed during the work shall be turned over to the University for recycling. Ballasts shall be separated into PCB and non-PCB categories and placed into separate 55-gallon (or appropriate smaller size) open-head steel DOT drum. Each drum must be labeled with appropriate labels: "PCB Ballasts for Recycling" or "Non-PCB Ballasts for Recycling". Disposal of lighting ballasts removed from Owner's property is prohibited unless the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University.

3.15 Pre-Transport Requirements for Hazardous Waste

3.15.1 General: The Contractor shall not mix hazardous materials or hazardous waste with other materials. Hazardous wastes shall be segregated until removal from the site.

3.15.2 Packaging: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, the Contractor shall insure, before transporting hazardous waste, packaging shall be in accordance with applicable DOT regulations 49 CFR 173 and 178.

3.15.3 Marking and Labeling: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, the contractor shall ensure before transporting hazardous waste, that markings and labeling on each package are in accordance with DOT regulations 49 CFR 172 and EPA regulations 40 CFR 262.31, .32. Markings, labels, and generator identification information (including UWF's EPA I.D. number) shall be permanently affixed to all drums and shipping containers.

3.15.4 Storage of Containerized Hazardous Waste: Place sealed and labeled disposal containers of hazardous waste in a lockable trailer, dumpster, or other container approved for satellite storage of hazardous waste. Hazardous waste shall remain under the direct control of the Contractor and must never be left where unauthorized persons could gain access.

3.15.5 Manifest: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, a properly completed manifest (EPA form 8700-22) shall accompany hazardous waste transported to the treatment, storage, or disposal site. Use the Owner's (University's) EPA identification number as the Generator. The manifest shall be completed by the Contractor's Hazardous Waste Contractor/Waste Hauler. Prior to shipment the Contractor shall complete the

"Contractor's Certification" form (FORM III) located in the Appendix to this Section, and bring the completed manifest and certification form to the UWF Office of Environmental Health and Safety Hazardous Materials Manager for signature as the "Generator". The Contractor will be provided with copies of the manifest and certification by the Office of EH&S.

3.15.6 Placarding: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, the Contractor shall ensure that hazardous waste vehicles are placarded in accordance with DOT regulation 49 CFR 172 before transporting.

3.15.7 Third Party Supervision: If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, all shipments of hazardous waste must be supervised by the UWF Office of Environmental Health and Safety, Hazardous Materials Manager. Provide the Office of EH&S notification 24 hours in advance of any shipment of special or hazardous wastes.

FORM II

CONTRACTOR'S CERTIFICATION

(Hazardous Waste Turned over to the University)

This certification shall accompany each completed Uniform Hazardous Waste Manifest submitted to the UWF 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 _____

(for EH&S Use Only)

<u>EH&S ID #</u>	<u>Chemical Description</u>	<u>Quantity</u>	<u>Date Collected</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

FORM III

CONTRACTOR'S CERTIFICATION

(Contractor Disposes of Waste)

If the Contractor so chooses to dispose of the Hazardous Waste generated on a project, and prior approval has been obtained from the University, this certification shall accompany each completed Uniform Hazardous Waste Manifest submitted to the UWF 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 Uniform Hazardous Waste Manifest by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable state, federal, and international regulations.

I certify that I have made a good faith effort to minimize my waste generation and to select the best waste management method that is available.

Contractor's Signature _____ Date _____

Contractor's Name (Printed) _____ Date _____

Title or Position of Signatory _____