Hazardous Materials Management Plan

April 2016
Hazardous Materials Management Plan

I. General

II. Responsibilities

III. Definition of Hazardous Materials

IV. Shipment of Hazardous Materials

V. Identifying Hazardous Waste

VI. Hazardous Waste Handling

VII. Labeling
   A. UNC Hazardous Material / Waste Tag

VIII. Packaging

IX. Waste Storage Areas
   A. Pick-up Schedule

X. Satellite Accumulation Areas

XI. Waste Profile / Analysis

XII. Recordkeeping

XIII. Training

XIV. Emergency Procedures

Appendix

Appendix A – Hazardous Material / Waste Tag
Appendix B – Satellite Accumulation Area Monthly Inspection Form
I. General

The Hazardous Materials Management Plan (HMMP) is developed and implemented for faculty, staff, and students of the University at Northern Colorado (UNC), as well as other community entities, contractors, and individuals who may be participating on campus. It is the purpose of this plan to provide guidance in the safe and proper storage, handling, transportation, and disposal of hazardous waste.

With the enactment in 1976 of the Resource Conservation and Recovery Act (RCRA), the storage, handling, transportation and disposal of hazardous wastes became regulated under Federal, State, and local laws. The Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) have developed regulations for compliance with RCRA. CDPHE regulations are in some instances more stringent than the EPA regulations.

This plan does not cover all regulatory requirements regarding hazardous materials, but should be considered the minimal requirements in order to comply with regulations which affect the management of hazardous materials.

II. Responsibilities

UNC is registered with the EPA as a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste. It becomes the responsibility of each employee to identify any possible hazardous waste that he or she might be generating and then assure that the waste is handled in a manner consistent with regulations.

Campus Policies

UNC Board of Trustees has adopted a policy (1-1-507 Hazardous Materials) which states:

Employees who handle toxic or hazardous substances on behalf of the University are required to maintain, use and dispose of such substances in accordance with applicable UNC Hazardous Material Management Plan procedures, state, federal and local laws/regulations as a condition of their employment. The employee should obtain assistance in ascertaining his/her obligations under these laws and regulations from the
Manager of Environmental Safety or his/her designee. Any employee who violates any such laws or instructions given by the University Environmental Safety Office shall be deemed to have acted outside the scope of his/her authority.

Environmental Health & Safety

Environmental Health and Safety (EHS) is primarily responsible for the implementation of the Hazardous Materials Management Plan. The Director of EHS is responsible for administering UNC’s HMMP.

III. Definition of Hazardous Materials

“Hazardous Material” is any material or substance, which if improperly handled, can be damaging to personal health and the environment.

Hazards associated with a material may be determined by reviewing the Safety Data Sheets (SDS), the product label, or the shipping papers. Federal and State regulations determine if a material is hazardous through specific listings and definitions addressed in EPA regulation 40 CFR 261 and CDPHE regulation 6 CCR 1007-3, Part 261. The final tool in determining if a material is hazardous is personal knowledge; an individual may have created the materials or have specific information about the material’s ingredients.

IV. Shipment of Hazardous Materials

Any Hazardous Materials that need to be shipped from the University of Northern Colorado will be coordinated through the Department of Environmental Health and Safety. The University will hire a certified contractor to properly prepare all documentation and ship hazardous materials from the University to maintain regulatory compliance.

V. Identifying Hazardous Waste

EPA’s RCRA has established authority and control of handling and disposing of all solid chemical wastes and discarded liquids and gases in containers. All generators of RCRA regulated waste are required to determine if the waste is hazardous. This is accomplished by determining if any of the constituents of the waste are specifically “listed” hazardous waste constituents or if the waste has a regulated characteristic of hazardous waste.

“Listed” Chemical wastes are broken down into the following lists:

“K” listed waste from specific sources.
“F” listed waste from non-specific sources.
“U” listed wastes from off-spec or discarded commercial chemicals.
“P” listed wastes from off-spec or discarded commercial chemicals which have been designated as acutely hazardous.

Under the Hazardous and Solid Waste Amendments (HSWA) of 1984, additional substances were incorporated into the hazardous waste regulations by having characteristics of hazardous waste. A generator must determine if a waste possesses one or more of the following characteristics: ignitability, corrosivity, reactivity or toxicity. A waste known to be contaminated with constituents having one or more of the four characteristics must be handled by the generator as hazardous waste, unless the generator develops the detailed waste analysis required to establish the absence of regulated characteristics to the point specified in the regulations.

Characteristics of Hazardous Wastes

**Ignitability** – A chemical waste is ignitable if it has a flash point below 140 degrees Fahrenheit, if it is an ignitable compressed gas, or if it is a substance that readily yields oxygen to stimulate combustion. EPA hazardous waste number D001.

**Corrosivity** – Chemical solutions with a pH less than or equal to 2 or greater than or equal to 12.5 are considered corrosive. EPA hazardous waste number D002.

**Reactivity** – Chemicals that are normally unstable or react violently with water. EPA hazardous waste number D003.

**Toxicity** – Toxicity Characteristic Leaching Procedure (TCLP) toxic chemicals are waste in which extracts contain high concentration of heavy metals or pesticides that could be released into the groundwater.

Federal, state and local laws regulate the disposal of hazardous materials. The disposal of any hazardous material in the sewer system, storm water system, on the ground, or in the regular trash is strictly forbidden.

**VI. Hazardous Waste Handling**

Once solid waste is identified as hazardous waste by the generator, it must be handled in accordance with the HMMP. Hazardous waste must not be: disposed of or recycled with other forms of trash or waste, burned or allowed to evaporate into the air, disposed of or diluted in water (i.e., down the drain), nor disposed of on or buried in the land.

An appropriate, compatible container (bottle, jar, drum, etc.) must be used to accumulate waste. It must be properly labeled. Hazardous waste containers must be kept closed except when adding or transferring waste and the contents of the containers must be compatible with the container.

Transporting hazardous waste by vehicle on campus shall be conducted by the EHS department or EHS designee (contracted waste hauler, etc).
VII. Labeling

A chemical container must be labeled as hazardous material / waste at the time that its content is designated as a hazardous material / waste. When a hazardous waste is added to a container, the container must be labeled as hazardous waste and dated at the time the first amount of hazardous waste is added to the container. Labels can be obtained through the EHS department.

The UNC Hazardous Material/Waste tag (section VII.A) will be used on all waste containers. The container must be clearly labeled with the full written chemical name, chemical components, waste volume and Generator’s signature. If the collection container contents contain a mixture, all components must be listed by percent or volume on the UNC waste tag.

Containers will not be reused once designated for hazardous waste disposal.

A. UNC Hazardous Material / Waste Tag

The UNC Hazardous Material / Waste tag (see Appendix A) shall be filled out completely when used. If a mistake is made on the tag, discard the tag and complete a new tag. Dispose of the old tag in the trash.

Once the material is ready for pickup or to be taken to the waste storage area, check the “Ready for Pick-up” box in the top right corner, and then send the top copy to EHS.

Tags can be obtained through the EHS department.

VIII. Packaging

U.S. Department of Transportation (DOT) regulates the proper packaging of waste containers. DOT regulation 49 CFR 172 provides information on the proper container selection for hazardous waste. In addition, waste storage containers must be non-leaking, chemically compatible, safe, and clearly labeled. Hazardous materials must be kept in appropriate closed containers at all times, except when adding or removing material. The following guidelines must be followed when packaging hazardous waste:

- Use a leak-proof container that will safely contain the contents.
- Do not mix incompatible chemicals.
- Do not overfill a container with liquid waste.
- Do not mix hazardous materials with non-hazardous materials.
- Allow an empty space of approximately five percent of the container volume for thermal expansion.
- Be suspicious of any pressure build-up inside the container.
• Hazardous waste must be stored based on compatibility. Store materials of the same hazard class together.
• Loose solid materials must be placed in a sealed container.
• Old cans of ether, picric acid and other peroxide forming or shock sensitive items shall be left in place and not disturbed. Contact UNC Police Department (UNCPD) immediately.
• Do not leave funnels in the collection container (unless the funnel has a lid and then the lid must be kept closed at all times except when adding waste material)

IX. Waste Storage Areas

Hazardous wastes must be stored in designated waste storage areas. Waste storage areas must be placed next to or near the point of waste generation, and the individual who operates that process or area must manage and control the hazardous waste container.

Waste storage areas can be in a laboratory fume hood, on a countertop, or on the floor (5 - 30 gallon containers), but not in an aisle. They should not be placed in front of or behind doors or windows, blocking means of egress or suspended from equipment.

Aisle space must be maintained to allow the unobstructed movement of emergency equipment and personnel into all areas where waste is stored.

UNC has three Hazardous Waste Storage Areas on campus. Once waste containers are full, they are then transferred to the designated hazardous waste storage area.

• Waste generated on East Campus will be stored in the waste storage area in the Facilities Management storage building (east of the Heating Plant).
• Waste generated in facilities located on West campus will be stored in the waste storage area at Ross Hall.
• Waste generated in facilities located on Central campus will be stored in the waste storage area in the Arts Annex metal yard.

Proper labeling (section VI.A) must be used when placing containers in a waste storage room.

A. Pick-up Schedule

EHS coordinates hazardous waste pick-ups for all campus departments that generate hazardous waste. It is the responsibility of the generator / manager of the hazardous waste to notify EHS of hazardous waste to be disposed.

A contracted hazardous waste disposal company provides waste pick-ups to campus.
X. Satellite Accumulation Areas

A generator may accumulate no more than 55 gallons of total hazardous waste or one quart of acutely hazardous waste in containers at or near any point of generation where wastes initially accumulate and which is under the control of the operator/generator of the process that generates the waste, either visually or under lock and key. The following guidelines shall be followed when utilizing a Satellite Accumulation Area:

- Satellite accumulation waste must be stored in a container that is in good condition and that is compatible with and will not react to the waste being stored.
- Satellite accumulation containers holding hazardous waste that is incompatible with any waste or other materials stored nearby in other containers must be segregated by a wall or other appropriate mechanism.
- All containers must be properly labeled with the words “Hazardous Waste” as well as identifying the contents of the containers.
- Containers must remain closed at all times, except when adding or removing waste materials.
- Do not leave funnels in the collection container (unless the funnel has a lid and then the lid must be kept closed at all times except when adding waste material).
- Satellite accumulation containers must be clearly marked with wording that identifies the contents such as: “Hazardous waste”, “waste solvent”, “Acid waste” etc.
- The date when the initial accumulation begins must be clearly marked and visible for inspection on each container.
- All students and employees shall be trained and familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal operations and emergencies.
- Each generator is responsible for ensuring that monthly inspections are conducted all areas where satellite accumulations containers are stored.
- Each satellite accumulation container must be inspected once during each month for signs of container deterioration and leakage, compatibility with the hazardous waste stored inside the container, that the container is in over all good condition and properly maintained, and that the container is labeled and closed appropriately.
- Problems revealed during the monthly inspection must be corrected on a schedule which ensures that the problem does not lead to an environmental or human health hazard. If there is an imminent hazard or a hazard has already occurred, remedial action must be taken immediately.
- A log of these inspections (see appendix B) shall be kept and shall include the following information:
  - date of the inspection
  - who performed the inspection
  - what satellite accumulation containers were inspected
• the results of the inspection (e.g. container not labeled), and how many deficiencies were remedied (e.g. labeled an unlabeled satellite accumulation container “Hazardous Waste”)
• The completed Satellite Accumulation Area Monthly Inspection Form shall be turned in to EHS.

XI. Waste Profile / Analysis

When EHS receives Hazardous Material / Waste tags, information is reviewed to find out if a waste stream profile is required for transporting and disposing of the waste. If a waste stream profile is required the generator of the waste will be asked for additional information which may include: physical and chemical properties, hazardous characteristics, viscosity, physical state, and chemical composition.

The contracted waste disposal company may request additional analysis of the waste. This can vary for each waste stream. Once the analysis is completed the waste stream profile request can be reviewed.

Waste stream profiles are reviewed and re-certified annually by the EHS department.

XII. Recordkeeping

All waste management activities shall be documented. The following are documentation requirements:

• All hazardous waste documentation related to transportation, shipment, regulatory reporting, and land disposal records, etc.
• Hazardous Material / Waste tags.
• Satellite Accumulation Area Monthly Inspections (retained for a minimum of three years)
• Initial / Annual hazardous waste management training. (Training conducted by departments separately – send a copy of the training roster to EHS.)
• All other hazardous materials documentation.

All waste management documents will be maintained by EHS for a minimum of seven years, unless otherwise indicated.

XIII. Training

Training is required for any UNC employee that generates or handles hazardous materials. Generators and/or handlers of hazardous waste must receive, at a minimum, Hazardous Communication training based on OSHA 29 CFR 1920.1200 and 29 CFR 1910.1450. Hazardous Communication training will include an introduction to the HMMP. Refer to the UNC Hazard Communication Program.
Additional training should be received by generators and handlers of waste. This training shall consist of emergency procedures, emergency system, and a review of the hazardous materials regulatory requirements set forth by EPA, DOT, OSHA and Homeland Security. The training will also include details of the HMMP as described in this document.

All training records must include the dates of training sessions, contents or a summary of the training session, names and qualifications of persons conducting the training, and names of persons attending the training session.

XIV. Emergency Procedures

The HMMP documents the University’s commitment to manage hazardous materials / waste so as to minimize the possibility of a release of hazardous waste into the environment. As part of this commitment, UNC maintains equipment on-site to facilitate spill cleanup.

The University has a Spill Prevention, Control, and Countermeasure (SPCC) Plan and Hazardous Materials Incidents Emergency Response Plan that is maintained by the EHS department. These plans support the spill response and emergency situations related to hazardous waste management.
Appendix A

Hazardous Material / Waste Tag
Satellite Accumulation Area Monthly Inspection Form

**Instructions:** Inspect waste containers holding hazardous wastes once a month for leaks, signs of corrosion, swelling, and proper labeling. If a container is found to be leaking, immediately transfer the waste to a new container. Containers must be closed at all times except when adding wastes. Incompatible wastes must not be stored next to each other unless they have a separate secondary containment.

<table>
<thead>
<tr>
<th>Date of Inspection</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspector Initial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All containers closed?</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>All containers properly labeled, legible and complete?</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>All containers undamaged, free of leaks/spills</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Containers free of debris?</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Container is compatible with other materials within close vicinity?</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Containers properly stored in secondary containment</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Proper access/isle space available?</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Full containers moved to proper storage location within 5 days</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Corrective action taken/comments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Circle Y for YES or N for No for each question
All NO responses require immediate corrective actions.

Accumulation Area Location: ___________________ Inspector Signature: ___________________ Date ____________

Turn in completed form to Environmental Health and Safety (Campus Box 57)