



National Youth Science Foundation

Inspiring Lifelong Engagement and Ethical Leadership in STEM

Document:	Hazardous Materials and Hazardous Waste Policy
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Purpose

This policy and enclosed procedures address the National Youth Science Foundation's (NYSF) hazardous materials and hazardous waste management. The NYSF is committed to providing a safe and healthy environment conducive to learning and living to its students, faculty, staff, and visitors while protecting the environment and maintaining compliance with local, state, and federal environmental and health laws and regulations.

Scope

This policy applies to all persons affiliated with the NYSF including faculty, staff, students, visitors, and contractors who work with or around hazardous materials and hazardous waste and to those areas which may be affected by the presence of such materials including public and private facilities in areas visited during off site or overnight trips. The management of hazardous materials and hazardous waste through their acquisition, utilization, storage, and disposal is critical.

Definitions

1. "Hazardous Materials" is any item or agent (biological, chemical, physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Hazardous materials are defined and regulated in the United States primarily by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each has its own definition of a hazardous material.
 - a. OSHA's definition includes any substance or chemical which is a "health hazard" or "physical hazard," including chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers, agents which act on the hematopoietic system, agents which damage the lungs, skin, eyes or mucous membranes, chemicals which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found at 29 Code of Federal Regulations (CFR) 1910.1200.
 - b. EPA incorporates the OSHA definition and adds any item or chemical which can cause harm to people, plants or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. (40 CFR 355 contains a list of over 350 hazardous and extremely hazardous substances.)
 - c. DOT defines a hazardous material as any item or chemical which, when being transported or moved, is a risk to public safety or the environment and is regulated as such under the Hazardous Materials Regulations (49 CFR 100-180), International Maritime Dangerous Goods Code, Dangerous Goods Regulations of the International Air Transport Association, Technical Instructions of the International Civil Aviation Organization, and the U.S. Air Force Joint Manual "Preparing Hazardous Materials for Military Air Shipments."
 - d. The NRC regulates items or chemicals which are "special nuclear source" or by-product materials or radioactive substances. (See 10 CFR 20).
2. "Hazardous waste" is waste that poses substantial or potential threats to public health or the environment. In the United States, the treatment, storage and disposal of hazardous waste is regulated under the Resource Conservation and Recovery Act (RCRA). Hazardous wastes are defined under RCRA in 40 CFR 261 where they are divided into two major categories: characteristic wastes and listed wastes.

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Policy

All students, faculty, staff, and visitors must coordinate with the NYSF's executive director to manage the risk to exposure to hazardous materials and hazardous waste. When present, these materials must be accompanied by appropriate SDS (safety data sheet) materials or other appropriate documentation.

Procedures

Procedures for bringing a hazardous material to National Youth Science Foundation programs

Prior to arrival

1. The person providing the material (henceforth referred to as "provider") shall supply to the National Youth Science Foundation (henceforth "NYSF") an itemized list of materials that may be used throughout the course of his/her stay, as well as wastes that may be generated.
 - 1.1. This list shall be meet the following requirements:
 - 1.1.1. Be provided with an acceptance of invitation to present at a NYSF program.
 - 1.1.2. Follow the provided template
2. Every effort shall be made to limit use of material wherever possible (i.e., replace the hazardous material with a nonhazardous analogue). If replacement is not possible, every effort shall be made to limit the quantity and concentration of the material.
3. At any time, the Executive Director of the NYSF (henceforth "Director") or any member of the Board of Trustees of the National Youth Science Foundation (henceforth "Board") may reject the use of any material for any reason. The Director or Board shall consult an outside, third party SME (safety management engineer) for guidance as needed.
4. Once the materials have been approved for use, the provider must also provide precautions that he/she will take to prevent exposure to the material by those attending a NYSF program. This written proposal shall include engineering controls, administrative/personal controls, and PPE (personal protective equipment) to be used by the provider, as well as PPE to be provided to those in attendance of the presentation (to be provided by NYSF). The written proposal shall also include an SPCC (spill prevention, control, and countermeasure) plan as well as disaster mitigation, if applicable. The facility itself has an SPCC plan, but the provider shall provide amendments and addendums to the plan as needed, and at the discretion of the Director and/or Board.
 - 4.1. A template for the proposal can be found attached to this document.
5. No less than seven (7) business days before the provider's arrival, the most recent Safety Data Sheet (SDS) shall be provided to Director. This sheet will be kept on site in accordance with the OSHA Hazardous Communication regulation, 29 CFR 1200.
 - 5.1. A copy of the SDS shall also be maintained with the material.
6. The provider will specify a schedule of the necessary equipment and facilities required to accommodate the materials and waste relating to the provider presentation. Upon approval of the schedule, the NYSF, Board, Director, and provider will work together to ensure that regulatory requirements are met. The NYSF, Board, Director, and provider will work together to ensure that regulatory requirements are met.
7. If the material is to be shipped by means other than personal transportation, the provider is responsible for shipping costs, as well as ensuring that the package meets all applicable local, state, and federal regulations for hazardous material transport.

Upon Arrival

1. When transporting hazardous materials to a NYSF site, the provider shall notify the appropriate NYSF staff on arrival; this is normally the program area coordinator or equivalent or the program director. Then the hazardous material shall be placed in an appropriately secure location in appropriate storage. As NYSF provides no training to its staff regarding hazardous materials handling, the provider is responsible for moving the materials while on site. When required, a written chain of custody form shall be included with the material.
 - 1.1. The custody form shall include fields for name, time and date, starting location of material, ending location of material, amount of material used, and reason for movement/use, and a signature line.
2. When not in use, the material shall be stored in an appropriate container. The material shall not be removed from storage until the time in which it is needed.
3. The material may only be removed from storage by the provider, and any use of the material in an educational setting must be under the direct supervision of the provider.

4. At all times, the NYSF shall maintain a list of all hazardous materials on site. This list shall be posted in the main program office, and will include such information as material, provider name, and current location of material. Also provided will be local emergency response numbers, such as EPA Field Office, local Fire and Police Department, and West Virginia DEP contacts.

During Use

1. Upon removal from secure storage, the material is under the sole control of the provider. At no time will supervision of the material be transferred to another party.
2. The provider shall provide the students and staff with a brief primer on the risks of the material, as well as the safety measures to prevent exposure, how to handle an accidental release, and PPE instructions (if applicable).
 - 2.1. The exact content of the primer is at the discretion of the provider, but recognize that most staff and students at NYSF programs have limited experience in hazardous material management, and should be instructed as such. The primer should be understandable and usable by persons otherwise unfamiliar with hazardous materials.
3. When possible, the provider shall be the sole handler of the material to limit accidental exposure.
4. Any waste generated shall be sequestered in the appropriate container, provided by the NYSF.
 - 4.1. Disposal costs shall be covered by the NYSF, as transporting material classified as waste typically have more stringent regulation than unused materials.
5. Unused material shall be placed back into secure storage as soon as possible.
6. An emergency spill kit shall be within close proximity of the provider throughout the material's use.

After Use

1. After use of the hazardous material, the material shall be placed in appropriately secure storage.
 - 1.1. Any waste materials produced from the experiment shall be disposed of as soon as possible.
2. When the provider leaves camp, they shall also remove the material, unless prior arrangements have been made.
 - 2.1. These arrangements shall be in written form and be agreed upon by the provider and the Director PRIOR TO the material coming onsite.

