HEALTH
AND
SAFETY
MANUAL

5th EDITION
2005-06 ACADEMIC YEAR

Revised February 1, 2006

Massachusetts College of Art
621 Huntington Avenue
Boston, MA 02115
EMERGENCY INSTRUCTIONS

In Case Of Fire:
1. Leave the immediate area, closing all doors behind you.
2. Sound alarm by pulling handle on the fire alarm station.
3. Call Campus Police on Extension 7800.
4. Use a portable fire extinguisher only if you know how to do so and the fire is very small. Sound the fire alarm before using a portable extinguisher.

In Case Of Injury:
1. If chemicals are on skin or in eyes then immediately start rinsing affected area with water.
2. If possible, remove victim from immediate cause of injury and call Campus Police on Extension 7800.

In Case Of Spill Or Leak:
1. Turn off all ignition sources and open all outside doors/windows to let any flammable vapors escape.
2. Call Campus Police on Extension 7800.
3. Evacuate area immediately if spill or leak produces hazardous vapors.
4. Use spill kit, if possible, to contain spill/leak so it won’t spread further. Wear appropriate protective equipment.
EMERGENCY INSTRUCTIONS

When Reporting an Emergency:
1. Give exact location of emergency (Bldg., Rm., Etc.).
2. Give your name & phone no. from where you’re calling.
3. Describe nature of emergency (fire, leak, spill, injury).
4. Stay near phone, if possible, for additional instructions.

Emergency Information:
Nearest Telephone: __________________________
• Campus Police Office: Extension 7800
• Campus Safety Office: Extension 7939
Nearest Fire Alarm Station: _________________
Nearest Fire Extinguisher: __________________
Nearest Emergency Shower/Eyewash: _________
Nearest Chemical Spill Kit: __________________
Area Supervisor (name): _____________________
    (phone number): ____________
Emergency Coordinator (name): _____________
    (phone number): ____________

(Continued on inside back cover)
MASSACHUSETTS COLLEGE OF ART

SAFETY POLICY

It is our policy to take all practical steps to provide a college community that is free from recognized threats to life and health. The College will, therefore, maintain an aggressive Health & Safety Program that will be in full compliance with Federal, State, and Local laws and regulations.

Each member of the College community has a particular responsibility for acting in a safe manner and for reporting unsafe conditions immediately.

In carrying out this responsibility, the Health & Safety Office should be called upon for assistance, but the availability of such assistance in no way reduces an individual's responsibility for their own safety and the safety of others.

The students, faculty, and staff are the vital resources in our community and their well-being is of primary importance.

Katherine H. Sloan, D.A.
President
General Precautions ......................................................... 47
Care of Equipment ........................................................... 48
Operation of Equipment .................................................. 49
Special Guidelines for Metals Studio Operations ........ 50
Special Guidelines for Sculpture Studio Operations ... 55
Electrical Equipment and Connections ...................... 55

Safety Rules for the Glass Studio .................................... 57
  General Precautions ...................................................... 57
  Use of Equipment ........................................................ 57

Safety Rules for the Ceramics Area ............................... 58
  General Precautions ...................................................... 58
  Personal Safety Around Kilns ....................................... 59
  Kiln Safety ..................................................................... 60

Safety Rules for the Fibers Area .................................... 61

Safety Rules for Art Education ....................................... 63

Appendix A
Hazardous Waste Disposal Procedures ....................... 64

Appendix B
Further Reading Material .............................................. 70

Appendix C
Sources for Safety Products ......................................... 73
PREFACE

This 2005-06 edition of MassArt’s Health and Safety Manual is a very basic revision of the previous edition, and is limited primarily to updating old telephone numbers. This is an interim step in turning this document into a more computer friendly (HTML) format that will be available on the MassArt web site (www.massart.edu).

Since this is intended to be an evolving document specifically addressed to the MassArt community any and all suggestions for future revisions should be addressed to:

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HEALTH AND SAFETY MANUAL

INTRODUCTION

The Massachusetts College of Art has prepared this manual to give the working artist an overview of the hazards connected with the materials he or she is using, and suggestions on how to use them safely. In addition to identifying these materials, guidelines on the use of studio equipment have also been included.

In many cases it is not known whether a particular material will cause health problems to an artist. It is well documented however, that you will place yourself at a much higher level of risk by practicing your art without following studio rules that have been developed to minimize your actual exposure to toxic materials.

The College’s studio safety program has been developed to allow you, the artist, to practice your art in an environment that allows working with toxic materials. Material Safety Data Sheets (MSDSs) are on file in each Chairperson’s office, in the Health & Safety Office, and in open studios. If you have a question relative to materials you are using or would like to use, please read the information contained in these sheets. Remember, you are working with a chemistry that has the potential to be highly toxic if used improperly or if used without taking necessary precautions by equipping yourself with respirators, goggles, gloves, etc.

Chemicals can enter the body through skin contact, ingestion through the mouth, and through inhalation. Of the above, skin contact and inhalation are the most common methods of entry. Our body has defensive barriers; but many art products contain acids, caustic alkalies, peroxides, bleaches and organic solvents which may cause deterioration of these body defenses. Constant exposure can cause both severe short and long term damage.
The breakdown of these defenses may occur suddenly and immediately or slowly over an extended period of time. Disruptions to the digestive system can occur when your hands, contaminated with art chemicals, come in contact with your mouth. This often occurs when food, cigarettes, or soft drinks are exposed to these chemicals in your studio. While most people have the common sense not to drink toxic substances directly, people have been known to accidentally consume chemical substances which have been placed in common eating or drinking utensils. Do not put paint thinner in a coffee cup or glass. Inhalation materials contribute significantly to the disruption of your digestive system. Once inhaled, materials travel through your stomach and finally find their way into your bloodstream.

The first rule to be observed is, therefore:
**DO NOT EAT, DRINK OR SMOKE IN A STUDIO OR STUDENT WORK SPACE!**

The second rule in this connection is:
**DO NOT EXPOSE FOOD OR BEVERAGE TO ART MATERIALS! DO NOT USE CONTAINERS FOR BOTH FOOD AND ART MATERIAL STORAGE.**

Breathing vapors or dusts is a very common method by which materials enter the body. Some of these, such as glacial acetic acid (a "stop bath" in photography), welding fumes, wood dust, clay glazes, glass grinding materials and other noxious materials, can cause damage to your lungs and sensitive airway linings. Studio procedures and rules have been developed to allow you to work safely in these areas.

When working in a studio, follow all "use-of-equipment" rules carefully. Students are not permitted to operate any studio equipment without having first been trained and cleared by a College technician or instructor.
Be especially attentive to rules and notices posted on the bulletin boards found in many studios and workshops. Important information on repairs etc., may be found there.

**DO NOT TOUCH OR OPERATE EQUIPMENT THAT IS POSTED “OUT-OF-SERVICE” OR “DO NOT USE”.** This is especially true of remotely operated switches, pedals, etc.

Use of any art-making materials not supplied to you by the College is prohibited unless prior approval has been obtained from your instructor(s). This fundamental studio rule must be adhered to when contemplating use of any private materials. Material Safety Data Sheets (MSDSs) must be obtained by the prospective user from the substance manufacturer or distributor and given to the course instructor. Call the Health and Safety Officer if you have difficulty obtaining the required MSDSs.

This manual reflects the commitment of MassArt to you, the artist, to provide a safe environment in which to practice and learn. We urge you to read each section as it applies to your curriculum and to follow these most important guidelines. Please remember, you are using substances that contain toxic materials. Use and treat them with respect.
SPECIAL SAFETY POLICIES

From time to time, experience shows the need to emphasize a particular safety policy, or significantly revise an old one. To ensure these are easy to find they are being introduced in this section of the manual.

Safety Policy on Hazardous Materials Not Related to Academic Work at the Massachusetts College of Art

During a routine pickup, the College's hazardous waste contractor recently discovered a small container of an extremely hazardous material (liquid bromine). There is no conceivable artistic purpose for bromine in this form, so it remains a mystery as to why it would have been brought on campus. It was found in an unlocked cabinet in an area of the school with unrestricted access; it could have been removed from the cabinet by any casual passerby. The material was both corrosive and poisonous. Had it been spilled it would have presented a significant environmental and health hazard.

Our hazardous waste contractor had to specially package this container and transport it off the premises in a completely separate vehicle. This was inconvenient and costly, although not as bad as it would have been had there actually been a spill.

Effective immediately, no student of the Massachusetts College of Art may bring onto the College's property any hazardous material that is not directly related to the academic or social function of the School.

The Massachusetts College of Art reserves the right to prohibit storage or use on the premises of any material that, in the opinion of the College, is too hazardous to be present regardless of its intended use.
The owner or possessor of unsuitable materials will be asked to promptly remove them from the premises. If the owner cannot, will not, or should not (because of high risk) remove the material themselves from the campus it will be sequestered by either the Safety Office or the Campus Police for subsequent removal and disposal at the expense of the material's owner. If the material is an illegal narcotic or an explosive or pyrotechnic device of any type, it will be confiscated by the Campus Police and its owner or possessor may be subject to appropriate discipline.

The procedures by which an unusually hazardous material should be used safely should be determined in advance by joint consultation with the appropriate faculty and the Safety Office.

For assistance or further information, call the safety office (617-879-7939).

**Safety Policy on Storing Hazardous Materials in Lockers and Cabinets**

The Facilities Department has found several instances in which lockers and cabinets have contained hazardous materials, such as flammable paint solvents, in unclosed or fragile containers that could spill or break. This is a major hazard for anyone who must move furniture during housekeeping, maintenance or renovation work.

No student at the Massachusetts College of Art may store a hazardous material (solid, liquid or gas) in any locker, cabinet, desk, credenza, or similar piece of furniture except under the following conditions:

1. The material is directly related to work being done at the Massachusetts College of Art.
(2) The student obtains a copy of a Material Safety Data Sheet (MSDS) or other appropriate literature (i.e. photocopy of the printed label) that describes the hazards of the material.

(3) The instructor or studio manager running the course for which the material is to be used must give permission for storage after reviewing the safety material provided by the student. (Note: the instructor or studio manager is requested to send a copy of the safety information to the Safety Office in the Tower Building, Room 640).

(4) The hazardous material is always stored in an unbreakable container (i.e. metal or heavy plastic) that is closed with a cap or lid that will prevent leakage when the container is tipped over. Where possible, the storage container shall be the one in which the hazardous material was originally obtained.

(5) Specifically prohibited are the following types of containers:

- Glass jars or bottles (unless originally supplied this way).
- Uncapped or open containers of any sort.
- Coffee cans, beakers, jars, etc. with loose or improvised lids (i.e. corks, wax paper or plastic wrap, etc.).
- Food containers (such as Tupperware [TM], soft drink bottles, etc.) that are not clearly labeled as containing hazardous materials.
- Damaged containers of any sort or already leaking containers.
(6) No container for a flammable liquid (e.g. Thin-X, turpentine, etc.) may not be larger than one-gallon (a fire department regulation). Other hazardous liquids (e.g. photo solutions, etchants) may be stored by students in containers larger than one-gallon only when approved by the Safety Office (Tel: 617-879-7939) after the review described in item (3) above.

(7) On-site storage of any student owned material (hazardous or otherwise) is at the sole discretion of the Massachusetts College of Art. Materials whose ownership is not obvious; or that are not related to academic work at the College; or whose containers are unlabeled, damaged, leaking or otherwise faulty; or which represent any other unacceptable risk to life or property; or that may be reasonably considered unwanted or abandoned are subject to being removed from the premises without either prior notice or compensation to the owner.

For assistance or further information, call the Safety Office (Tel: 617-879-7939).
INDIVIDUAL STUDIOS

Food and drink must be kept clearly separate from art materials. There is to be no eating and drinking in the studios. Any violation of this rule will jeopardize a student's use of his or her space.

Studios are to be kept in good order. Solvent, flammable and corrosive material containers are to be kept covered at all times and stored in cabinets or lockers when not in use. ALL MATERIALS MUST BE STORED SAFELY. THIS IS YOUR ENVIRONMENT. PROTECT IT.

All waste solvents and other waste chemicals are to be poured into the disposal jugs provided by the College for this purpose. Oily rags are to be thrown away only in the special flammable rag disposal containers provided as indicated. Ordinary trash is not to be accumulated, but must be thrown out in the disposal barrels provided for this purpose. Do not mix incompatible chemical wastes. Do not mix chemical waste with trash. Do not pour chemicals down the drain! Detailed hazardous waste procedures are given in Appendix A.

Installations

There have been several instances in which an art installation had the potential to cause personal injury or serious property damage. These hazards included blocking fire exits, improper use of flammable materials, incorrect wiring of electrical devices and large, heavy items that were inadequately restrained from tipping over. Fortunately, there has so far been no serious damage or injury, but there is no reason to think that “good luck” will continue to be an adequate substitute for good planning.

Prior review by the Facilities Department and Safety Office is always required if an artist intends a performance or exhibition that requires the use of, or attachment to, any component of the School's buildings (i.e. plumbing,
electrical, ventilation, structure, etc.) or is intended to occur in any public “access” or “transport” areas of the school (i.e. lobbies, hallways, courtyards, stairways, sidewalks, etc.) regardless of any attachment to the School’s buildings.

Some judgment is to be exercised in deciding what should be reviewed. For example, posters, paintings, photographs, etc. that are to be attached to the walls would normally be exempt from a Facilities and Safety Review, while items requiring connections to electrical, water and air handling systems would be included. Special attention must be paid to any exhibit in close proximity to emergency exits, assembly room doorways, fire alarm systems, fire extinguishers, etc.

It is requested that the review be requested as far in advance of the performance or exhibition date as possible. Any request for a review less than ten (10) days before a performance or exhibition will be considered unreasonable since it risks the trauma of a last minute cancellation or major revision for the artist.

For assistance or further information, call the Facilities Department (617-879-7950) or the MassArt Safety Office (617-879-7939).

**Persons With Disabilities**

The safety concerns for people with disabilities are unique for each type of disability. Thus, each person covered by the ADA (Americans with Disabilities Act) should expect to meet with the College’s Affirmative Action Office for consideration of their particular needs (617-879-7060).
EMERGENCY PROCEDURES

The Public Safety Department at the College is on duty 24 hours a day, 7 days a week, and is equipped and trained to handle emergency situations that may occur on campus.

Emergency telephones are located in the corridors of all campus buildings. Simply lifting the receiver puts you in immediate contact with the Public Safety Department.

Emergency numbers on campus to remember are:

- POLICE 617-879-7800
- FIRE 617-879-7800
- AMBULANCE 617-879-7800

All emergencies must be reported immediately to your instructor or technician. The College has installed first aid kits in open studios for emergency use. Know the location of these kits for each department. Report any empty kits to an instructor or technician. Eyewash and deluge showers are located in appropriate studio areas. Chemicals in the eyes or on the skin require a minimum of 15 minutes rinse with an eyewash or shower, followed immediately by emergency medical attention by a doctor or nurse.

INFORMATION

As a convenience, the above emergency procedures are presented in check-list fashion inside the front cover of this manual. Please take a few minutes to fill in the Emergency Information section and keep it handy for future reference.

For further safety information and access to other safety resources call the campus Health and Safety Officer at 617-879-7939.
IDENTIFICATION OF HAZARDS IN GENERAL

AEROSOL SPRAYS

Aerosol sprays are very popular with artists. They are used for a variety of purposes: retouching, fixatives, adhesive sprays, painting, etc. Fine mists containing possible toxic materials can travel long distances or be suspended for extended periods before settling. In addition to the dangers that may exist from the active ingredients, propellants are commonly flammable or toxic as well. The hazards of the propellant are not always prominently indicated on the can's label.

In design studios, where sprays are frequently used, spray booths or rooms designated for such purposes should always be used. Be sure to direct spray away from anyone's breathing space. Store unused, or partially used, spray cans away from fire (or other ignition sources) and at a temperature that does not exceed 120°F. Empty cans should be disposed of in the trash promptly, as these containers can rupture if punctured or excessively heated. Use non-aerosol products if available.

CERAMICS

Many clay dusts and glazes are toxic. Dusts such as silica, asbestos and talc are listed as carcinogens and can cause disabling, lung scarring and sometimes fatal diseases. Most glazes also contain toxic metal compounds. Symptoms may take years to develop and may promote susceptibility to other diseases. Follow studio procedures and wear appropriate personal protection equipment, especially gloves, when working with toxic glazes. Use barrier creams when working with other materials.

During kiln firing, toxic fumes and gases are produced. These can include carbon monoxide, sulfur dioxide and
chlorine released from the clay or glazes. All gas or electric kilns should be in well ventilated areas.

Avoid procedures that produce dust. Keep materials wet. Work with pre-mixed clay (when possible). Clean up wet glaze spills before they dry. Wet mop or wet vacuum instead of sweeping. Sweeping generates particles of dust that will remain airborne and hazardous for as much as six hours after the sweeping has ended.

Protect your face and eyes. Use respirators and goggles during mixing, chipping and grinding. Always ensure that the space you are working in is well ventilated. Learn about the chemistry of the materials with which you are working by reading labels, charts and the MSDSs (Material Safety Data Sheets) before, not after, you use the material in your art.

**FIBERS**

Most of the hazards in the fiber arts come from dust. This hazard is especially prevalent in the early stages of processing, like during spinning fibers. Cotton, flax and hemp dusts can cause lung ailments years after exposure.

Imported animal fibers, especially sheep's wool or yarn, and hairs, expose the user to the risk of anthrax disease. All imported wool materials must be decontaminated by the supplier and examined carefully by the instructor before use.

Hazards in dyeing come from both the dyes and mordants, as well as from other dyeing assistants. Direct dyes for cotton, linen and rayon are often made from benzene-type derivatives. Fiber reactives or cold water dyes can cause severe respiratory allergies. Pre-reduced or pre-solubilized vat dyes are caustic to both the skin and respiratory system.
Many of the mordants used with dyes have the potential to be or, in many cases, are actually hazardous. In particular, sodium or ammonium dichromate can cause allergies, burns and skin ulcers. Inhalation of these materials can also cause serious damage to the nasal passages and respiratory system. Even the fumes from the molten wax used in the Batik process can be hazardous.

Using respirators or masks greatly reduces the risks described above. Properly storing your materials after each use will eliminate the hazards connected with exposed or unattended raw fiber materials. DO NOT STORE FOOD AND BEVERAGES WITH DYEING MATERIALS.

GLASS

When working with either hot or cold glass, many health and safety factors need to be considered. Toxic gases and dusts are of significant concern.

Respirators, gloves and safety glasses are essential when using the glass studios. Approved safety glasses having “flip-up” filters provide basic protection for the eyes against burns (from ultraviolet light) and cataracts (from infrared light) when the glass melting furnaces and “glory” holes are approached.

Carbon dioxide fumes can cause serious lung and respiratory distress. Dusts that are the byproduct of grinding and etching can enter your bloodstream through inhalation of these materials and could contribute to lung and other respiratory ailments.

As is stated above, the use of goggles, masks, respirators and gloves reduces your susceptibility to these materials.
PAINTING

When choosing a medium to use, most painters do not give sufficient consideration to the hazards connected with the use of different pigments. Even ready-to-use lead paints are dangerous to handle and precautions need to be taken. Carefully washing your hands after using these materials is crucial to ensuring that hazardous materials connected with them are not inhaled or accidentally ingested.

Use the smallest amount possible of any solvent. Do not use solvents to clean your hands - wear barrier cream or gloves when working and follow this with soap and water. Use solvent resistant gloves wherever possible.

PRACTICE GOOD STUDIO HYGIENE: KEEP YOUR STUDIO CLEAN. DO NOT EAT OR DRINK IN THE STUDIO - TOXIC MATERIALS CAN BE TRANSMITTED INTO YOUR DIGESTIVE SYSTEM.

Use gloves when handling varnishes, lacquers, thinners and epoxy resins. Make sure that there is ample ventilation. Most solvents are flammable: be sure that you are familiar with the location of your studio fire extinguisher. All fire extinguishers should be mounted and identified with signs.

When disposing of rags or used liquids please use the containers marked for this purpose. Storing oily rags in your studio not only creates a health risk to you, but it could contribute significantly to causing spontaneous combustion and result in a fire.

PHOTOGRAPHY

Many of the chemicals used in photographic processing can cause severe skin problems, and in some cases, lung disease through the inhalation of dusts and vapors. The greatest hazard occurs during the preparation and handling of
concentrated stock solutions and chemicals. During these steps it is essential that you wear splash goggles, and rubber gloves. Developers are highly toxic by ingestion and absorption. Special care should always be given when handling them.

Wear an acid-proof apron when working in the studio. Protect your face, eyes and hands when any chemical is used. Process and mix only in approved spaces. Remember, not all chemicals have distinctive odors or emit a readily detectable vapor. Use respirators whenever mixing or using photographic chemistry.

PRINTMAKING

Printmaking methods use a variety of solvents and solvent mixtures, primarily for cleaning. Aromatic hydrocarbons and other lacquer solvents are hazardous and must be used with adequate ventilation. Benzol must be avoided. Inks used in printmaking (black and white) usually contain carbon black. Studies have shown that repeated contact with carbon black can cause skin cancer years later. Protect your skin from absorbing these chemicals. Common toxic pigments used in printmaking include chrome yellow (lead chromate), zinc yellow (zinc chromate), milori green (lead chromate), and cadmium colors.

Since most solvents used in printmaking are skin irritants, skin contact with them should be avoided as much as possible through the use of gloves, especially during clean-ups.

Rags impregnated with ink or solvents may represent both a health and fire hazard. Be sure they are discarded into the special fire proof containers provided for this purpose.

One of the greatest hazards in intaglio printing is in etching the printing plates, particularly with acids. Acids
can cause severe skin burns. Eye damage from splashed acid can also be dangerous. One rule to always follow: ALWAYS ADD ACID TO WATER, NEVER THE REVERSE. Treatment for exposure to acid is to flush clear water on the affected eyes, skin or clothing for a minimum of 15 minutes, followed immediately with medical attention by a doctor or nurse.

Hazards in lithography include the handling of concentrated acid. Great care should be taken with this or with any other concentrated acid. Respirators, goggles, face shield, aprons, and gloves should always be worn.

Trays in the acid hoods must be kept covered to prevent unneeded exposure to fumes and reduce evaporation.

Lithography includes possible exposure to solvents, such as; mineral spirits, small amounts of lacquer thinner, and alcohol. Also, small amounts of acids, such as; nitric acid, tannic acid, hydrochloric acid, glacial acetic acid and phosphoric acid are used. Although these materials are used in relatively small amounts they are potentially dangerous if used incorrectly.

Caution must also be used in the operation of print equipment. Intaglio printing requires a great deal of pressure and it is necessary to operate the presses properly. Students must be alert and knowledgeable when operating print equipment and seek assistance when in doubt. The printmaking studio is only available to beginning students when there is a monitor present who is trained in the proper use of equipment. ALWAYS SEEK ASSISTANCE WHEN NECESSARY.

When toxic materials are used with the appropriate precautions, such as respirators and goggles, be sure that others who may be unprotected are not at risk of being exposed.
Hazards in silk-screening are minimized at MassArt because only water based inks are used. However, there are toxic materials contained in photo-emulsion and emulsion removers. Also, advanced silk-screen classes utilize photo chemicals such as, developers, stop bath and fixers.

The printmaking studio at MassArt is equipped with "state of the art" ventilation equipment, however, proper training and safety precautions are necessary to reduce the hazards associated with the use of printmaking materials. In addition, the ventilation system must be turned on for it to work. See an instructor or technician to ensure this has been done.

METALWORKING

Both the materials and the environment for metal working can be hazardous, regardless of whether one works in the jewelry studios or the foundry. In most instances, the hazards of the materials used arise from the dusts formed while grinding or polishing, the fumes from welding or soldering, or the vapors from casting, plating or cleaning, etc.

Any abrasive process, such as grinding or using a wire brush, can produce airborne debris that can cause damage to the eyes and the lungs. Welding, brazing and soldering can produce lead (from solder) and other metallic fumes. Polystyrene produces toxic smoke and fumes if used improperly during “lost wax” casting. Pickling solutions are caustic and most cleaning solvents are toxic to some degree.

Fire hazards are obvious to the user of gas torches of any sort. Propane gas cylinders are especially insidious because they are so common that it is easy to forget that they contain a flammable gas under pressure. They should not be knocked about wherever they are used, and they should
never be stored at temperatures over 120°F or discarded into a fire or incinerator.

The physical hazards of metalworking arise primarily from the use of a wide variety of tools and machinery, especially in the foundry, mold making rooms and machine shop. These include everything from simple hand tools to the overhead crane, lathes, trip hammer, etc. Virtually every accident (or “close-call”) is the result of inattention or improper use of the machinery and tools. IT IS MANDATORY THAT EVERY STUDENT BE PROPERLY INSTRUCTED IN THE SAFE USE OF ALL TOOLS TO BE USED IN A PROJECT.

Safety glasses, welder’s helmets, high temperature clothing and similar specialized items are provided by the school and must be used where required by the instructor. It is highly recommended that each student purchase an approved pair of safety shoes (with steel toes), especially if they intend to continue in the metal working media after graduation. Safety shoes cost no more than a good pair of hiking shoes and the security they provide against crippling foot injuries is invaluable. Consult the Health and Safety Officer for further information.

**SOLVENTS**

As an artist you handle and are continually exposed to solvents. Solvents are used for many purposes: to dissolve and mix oils, resins, varnishes; to clean brushes, silk screens and sometimes your hands (generally not a good idea).

Almost all solvents are poisonous if swallowed or inhaled in sufficient quantity. Similar properties exist among many different solvents. If one member of a class of solvents is toxic, usually another safer solvent can be used. Remember water is the preferred universal solvent. Solvent saturated
Rags can result in spontaneous combustion and must be air dried (with good ventilation present) and not stored wet.

Prior to using any solvent, review its MSDS, and read the precautions and warning labels on the container. Familiarize yourself with the side effects that could result from long-term or short-term over-exposure to the properties of that solvent. Dizziness, intoxication, and skin irritations are common ailments that result from the abuse of solvents.

Even low toxicity solvents can cause problems if misused. For example, virtually all solvents dissolve the natural fat and oils on your skin. Repeated use of such a solvent as a hand cleaner will “dry” out your skin, causing it to crack and leaving it subject to infections that may require intensive medical attention.
"Found" Objects Containing Potentially Hazardous Materials

The use of "found" objects from demolition or construction sites as part of an art project can be a productive and enjoyable way of developing perception and imagination. But it can also have its down side if the found object unknowingly contains hazardous materials. For example, a MassArt student recently brought to the school an interesting object that she’d found abandoned on an empty lot: part of an old street lamp or parking lot security light. Unfortunately, the insulation under the yards and yards of rhythmically spaced copper wire of the ballast transformer contained a substantial amount of hazardous asbestos.

It is not the intent of the School to discourage the discovery and use of aesthetically useful found objects, but it is important for the student to realize that prudence is required in obtaining and using such materials. It would indeed be tragic if, in the pursuit of an education, your health or that of someone else was unintentionally compromised. The following basic guidelines are offered for your information:

Protective Clothing

Building materials, such as pieces of cut off board, masonry, etc., may contain hazardous materials, such as asbestos, Polychlorinated Biphenyl (PCB) insulating oil, and creosote preservatives. Always handle such materials with waterproof latex or rubber gloves until you are sure of the risk involved. A pair of latex or neoprene domestic dishwashing gloves is an excellent choice.

All demolition sites, and many new construction sites, are dusty. As a general rule, one should be prudent and NEVER breathe the dust and grit in such places. If you are "Dumpster Diving" or just wandering about picking up things and looking at them it would be smart to wear a dust mask as well as your gloves. Construction people (such as bulldozer operators) regularly do this, so why shouldn't you do the same?
At the very least one should wear sturdy shoes with socks. If possible, the shoes should be safety shoes (the type with protective toe caps) to protect your feet should something be dropped or fall on your toes. However, even safety shoes, unless they have a special protective shank in the soles, will not protect your feet from stepping on broken glass, sharp metal or nails. Always watch where you're putting your feet.

Finally, wear heavy blue jeans and a long sleeved shirt for protection against sharp objects. Heavy clothing will not give you a 100% guarantee against injury, but it is better than your bare skin. In any event, ALWAYS WATCH WHERE YOU'RE WALKING OR KNEELING. If you are cut or scratched it is prudent to assume that the cut is probably contaminated with dirt, etc. Seek appropriate medical help no matter how minor the wound may appear.

**Asbestos**

The use of asbestos as a fire proofing and insulating material was most common between the early 1900s and about 1975. So be cautious about exploring demolished buildings of that vintage. Even though state and federal law requires asbestos containing materials be removed before a building is demolished there is no guarantee that these precautions are always followed. This is especially true of small scale, do-it-yourself renovations. The School’s Health and Safety Officer recently observed the renovation of an old “three-decker” during which radiator covers backed with flaking asbestos insulation were thrown into the trash. Before a protest could be lodged with the owner the trash truck came by and the material was long gone.
Asbestos is a naturally occurring mineral-like material that is both fireproof and a good insulator. By the time its health threatening properties were known it had become one of the most common constituents of many building materials. You should also suspect asbestos as being present in the following common building parts:

- Ceiling tiles. Be cautious if the ceiling tiles have become wet from a leak or the weather because once dry they will disintegrate and release airborne asbestos particles. This is the primary (but not sole) hazard from asbestos because it can be breathed and cause irreparable damage to your lungs.

- Floor tiles of the type that are "glued" down and certain kinds of linoleum. Generally, asbestos in floor tiles is enclosed by the tile material (vinyl, etc.) and represents no hazard.

- Cement-like fire proofing for steel beams and other critical structural parts that is applied with a trowel, somewhat like mortar for brickwork. Modern day fire proofing looks similar and cannot be positively distinguished from asbestos containing materials, so stay away from anything that looks like this.

- Insulation for pipes, boilers, hot water heaters, etc. This looks like grey or white plaster, or even cardboard tubing, and is commonly covered with canvas or plaster impregnated cloth. Many older furnaces, water heaters and boilers were literally slathered over with asbestos cement until they almost looked like an igloo.

- Canvas or similar fabric type material that was used to isolate parts of an air duct. They are usually found in narrow strips completely circling the duct and separating one section from another. Modern
substitutes have a similar appearance, so keep clear of all such fabric.

- Fire proofing for doors, usually in the form of a slab of white or grey colored asbestos enclosed in the hollow core of the door itself. Often, the asbestos can be exposed if doorknobs, locks, hinges and closers are removed. So be careful: What looks like an innocent slab of wood may contain an unpleasant surprise. Again, so long as the asbestos is not exposed to the air then no significant harm is likely, so don't break into doors and similar partition-like devices.

- Roofing materials are commonly applied in layers, some of which used to have substantial amounts of asbestos. The particular hazard here is, again, the crushing or breaking of the material so that it releases asbestos fibers into the air.

- Exterior shingles and interior insulating board that is white or grey in color and very hard, almost as though made of thin slabs of concrete. The main concern here is that the shingles or insulating board may have been disguised by being covered with vinyl siding, plywood panels or even wallpaper and you won't know it until you've broken through the covering.

**Lead Paint**

Paint containing leaded pigments were used virtually everywhere and one must assume that it is present at any demolition site (it is no longer used in new construction). For example, for many decades "red lead" was the primary coat of choice for priming iron and steel to prevent rust (the Tobin Bridge over the Mystic River in Boston is one of the best examples of this). Both the fumes from burning off lead
paint (which can be breathed) and the dust particles from sanded paint surfaces should be avoided.

Lead paint is particularly hazardous to children under the age of about six years. Unfortunately, the main hazard is now thought to be more insidious: Lead paint on exterior surfaces (walls, porches, railings, etc.) weathers with time and is washed away by rain into the surrounding soil where it can be ingested by children, or even taken up by the plants in an "urban" garden. So it is especially important that you remain as dust free as possible. Wear a dust mask and always use the same clothes when you are scavenging. Wash them separately from every thing else at the end of the day.

Pipes and Sheet Metal

Copper pipes, copper roofing and copper sheathing for walls and windows are attractive because of the green patina they acquire as they age. Generally, copper in this form is harmless. But if it has been soldered or coated with lead then the same hazards exist as for lead paint. The same is true for lead roofs and the leading from old windows. The main goal should be to remove and use them without using a torch or a saw that will cause toxic fumes and dust. Better methods are quite simple: Most thin materials of this sort can be cut with a heavy knife so that the material is not abraded. A simple pipe cutter having a circular cutting blade is quite inexpensive and should always be used for thin metal piping and tubing.

Remember that piping, especially if larger than an inch in diameter, is commonly used for sewerage. If you collect something like this be sure to bag it up while transporting it, then wash it thoroughly with a disinfecting solution (such as Lysol [TM]) and plenty of soapy water while wearing your waterproof gloves.
Mercury Lamps and Fluorescent Lamps

The large security lamps commonly found on buildings may contain mercury, which is toxic if its fumes are inhaled. The same is true of fluorescent lamps, except the amount of mercury is usually much smaller. The only safe course is to stay away from these devices, especially if they have been cracked or broken.

Vermin and Pesticides

Demolition sites and new building sites may contain residual pesticides used to exterminate the vermin commonly attracted to such areas. Look for warning signs. Look for various chemically laced "pest strips" and/or powders of a sugar-like consistency. Be especially watchful for dead vermin. If any of these are present it may indicate that intensive chemical warfare has been waged against mice, cockroaches, etc., and it is best to find another place to explore.

Another concern may be pigeon "droppings" that have accumulated on ledges, window sills and rooftops. As nice as pigeons may appear in flight, their droppings are unsanitary. At places such as ledges sheltered from the wind and rain, or other places where the pigeons roost, their accumulated droppings can pose a significant health hazard, especially if dry material becomes airborne and is inhaled. Stay well away from these spots.

Polychlorinated Biphenyl (PCB) Oils

Until a few years ago the use of a fireproof insulating oil containing PCB (Polychlorinated Biphenyl) was common in transformers and fluorescent lamp ballasts. PCB is a toxic, non-biodegradable substance that affects the liver and skin and is a suspect human carcinogen. However, it is harmless so long as the transformer or lamp ballast remains undamaged. Do NOT collect sealed transformers or lamp ballasts unless they are labeled "No PCBs". Beware of any electrical device covered with a light colored, yellowish or brownish, thick-gooey oil (not black asphalt or tar) since this is almost surely an indication of a PCB. Should you get
some oil of this type on your hands or face then promptly wash the affected area thoroughly with soap and warm water and use paper towels to wipe dry. Place the towels in a plastic bag and promptly discard into the trash. Do NOT panic. It is unlikely you have harmed yourself since most of the serious health problems with PCB appear to have required ingestion of large amounts or prolonged, systematic exposure to its vapors. So a single minor exposure of this sort is unlikely to cause you harm.

**Glues and Other Coatings**

Many new construction methods use special coatings (such as for waterproofing) and high strength epoxy glues that are mixed at the construction site. When combined and cured or properly dried these are perfectly safe. But often, unused and unmixed component parts are discarded in the dumpster. Thus it is always a good idea to never touch any liquids or thick tar-like or epoxy-like “goo” since these may not be healthy. If, for any reason you should get some on you, do the same as described above for PCB: Go home, wash up thoroughly, and bag anything contaminated before throwing it away.

However, do NOT use a solvent, such as Thin-X or turpentine, to clean your skin since these, by themselves, can be absorbed by the skin to cause serious long-term damage to your liver, etc. Solvents also remove the fatty material from your skin (lipids) that keeps it from cracking or peeling (which can give you a serious dermatological problem). Instead, use a lot of ordinary dish detergent or, if that is not effective, any of the mechanic’s hand cleaners available in hardware stores and large drugstores (in the automotive supplies section). These come in a small tub (about half the size of a can of coffee) and contain emulsifiers that are particularly good at removing oil and paint. They also usually contain lanolin, which will keep your skin from cracking or peeling.

**Solvents**
Solvents (such as turpentine), paint removers, etc. are always valuable and can be used anywhere, even on the next job site. So it is unlikely that they would be abandoned or thrown away unless they were contaminated with something or defective in some way. Take a hint: These "freebies" are not worth the possible hazards they contain.

**Mechanical Hazards**

Demolition and construction sites are filled with all sorts of mechanical hazards. Watch where you walk - boards with nails, window frames with broken glass, sharp pieces of metal and broken ceramic tiles can all cause nasty cuts that can easily become infected. Do not walk under flimsy or unsupported walls and roofs. Keep away from wires or other electrical equipment unless you are absolutely positive they are totally disconnected from the power system. Just because it is an old building does not mean the electric power is turned off.

- Keep away from holes and ditches that do not have supporting walls or a cover. Do NOT enter a ditch or hole deeper than your waist since you have a high risk of smothering if the walls collapse.

- Be cautious of dumpsters. Often they are overloaded and can easily tip over and dump several tons of debris onto you. Also, they may prove impossible to get out of once you're inside and discover they have very slippery walls.
Conclusion

Construction and demolition sites can be profitable sources of found objects, but they ARE hazardous. Be respectful of the hazards and you will not have many problems. Also, be respectful of the property since it does belong to someone. If it is posted "No Trespassing" then pay attention, you are breaking the law if you enter, even if the hazards don’t bother you.

For further information or assistance in identifying hazardous materials in "found" objects contact the Safety Office (617-879-7939).
GUIDELINES FOR INDIVIDUAL OPEN STUDIOS

CLOTHING, SAFETY GEAR AND PRECAUTIONS
FOR ALL STUDIOS

1. Specific protective clothing used only in the studio or shop should be used to prevent the spread of chemical residues. If this is impractical, then wear an apron of waterproof and chemically resistant material. Ideally, all garments should be cleaned after each use. Be sure to wash these items separately from other laundry. If you work with materials that are dust producing, wear coveralls or a lab type coat that stay in the studio or shop when you leave for the day. Also remember to cover your hair.

2. Gloves should be worn during all chemical processing. They should be kept clean and uncontaminated. If not, the gloves may provide more harm than if not worn at all. Be sure your hands are clean before putting on gloves. After each session wash the inside and outside of reusable rubber or plastic gloves. Check for leaks. Discard defective gloves. Use disposable gloves only once. Be sure glove material is compatible with the chemical being used. Solvents and corrosives may cause gloves to deteriorate. Do not use latex gloves while working with extremely toxic or corrosive materials except as “back-up” safety liners to rubber or heavy plastic gloves. Leather gloves are to be used in heat related situations, but special high temperature gloves are to be used in the glass, kiln firing and foundry studios.

3. Contact lenses should not be worn where hazardous debris or liquids may cause harm. Chemicals can accumulate under the lens, resulting in potentially serious injury. If possible, do not wear contact lenses in
the studio, but if you must, wear splash goggles over them.

4. Respirators may be necessary to protect your lungs against hazardous concentrations of toxic fumes, vapors and dusts. Respirators may also be necessary if you have a pre-existing allergy. They may not be recommended if you have a respiratory or cardiovascular disease. It is highly recommended that you consult your personal physician before using a respirator. When doing so, be sure to bring a list of the materials with which you will be working.

Selecting the correct respirator is not trivial. Some factors affecting the choice are: the materials being used, their concentration in the air, the size and shape of your face, etc. Beards must not be worn with respirators. Consult with the Health and Safety Officer if you need guidance in selecting the correct respirator.

Respirators become dirty (an occasional wash with water and dish detergent is recommended) and the cartridges or filters become exhausted. You must be knowledgeable as to when the cartridges or filters must be replaced with new ones. They cannot be cleaned or rejuvenated. Consult with the Health and Safety Officer if the when and how of changing cartridges or filters is unclear.

Many areas of the school require the mandatory use of respirators in order to use specific studios. Check with your instructor for specific details.

5. Safety (impact) glasses are required where the danger of flying debris exists. They must have side shields to prevent material entering from the sides. They must have special plastic lenses to resist impacts. Ordinary glasses are not an adequate substitute for approved safety glasses.
Unvented, or indirectly vented, approved splash goggles should be worn when handling dangerous chemicals. Splash goggles of this type completely enclose the eyes so as to prevent the entry of liquids. Open vented goggles are not suitable around liquids. All types of approved goggles can serve as a substitute for impact type safety glasses. Prescription glasses and (sometimes) contact lenses may be worn under approved goggles. Consult with the Health and Safety Officer. Glasses used for heat related processes must be ultraviolet and, where necessary, infrared rated for glass, kiln, foundry and welding studios.

Approved safety glasses, with “flip-up” filters are recommended when one must move away from a glass furnace or “glory” hole to a less bright working area. The filters must be at least “Shade 5” to be effective. Anyone approaching within approximately 5 feet of a glass furnace or “glory” hole must wear filtered safety glasses, regardless of whether they are the standard or “flip-up” type.

Welders goggles or helmets must be worn for all hard brazing, gas welding or arc welding. Specific information on these will be provided by the instructors.

6. Noise reducing ear muffs or ear plugs are required where the danger of hearing injury exists. Removable ear muffs are convenient because they can be easily put on and off, however, ear plugs provide greater noise attenuation. Which style to use is a matter of personal preference so long as they are intended specifically for hearing protection.

Do not deceive yourself - the damage by excessive sound levels is cumulative and usually irreversible, as has been discovered by many musicians. Wear hearing
protection wherever it is posted in a studio or workshop. Consult with the Health and Safety Officer if you need guidance.

7. Ingestion is a major cause of bodily contamination. Therefore, no food, drink, or smoking is allowed in the studios, classrooms or workshops.

8. Be sure to check with the technician or instructor if you are unsure of any procedure prior to beginning. Immediately report any problem or unsafe condition to the technician or instructor.

Rules For All Studios For Labeling Containers Of Hazardous Materials

It is illegal and dangerous to mislabel any kind of hazardous material regardless of whether it is new, used or waste. Any hospital emergency ward doctor can tell you of people who have been poisoned or disfigured by solvents and cleaning materials stored in common eating and drinking vessels. Should you think this is unlikely at MassArt, then observe around you the large number of 2-liter, plastic soft-drink bottles and coffee cans with plastic lids that are used to store turpentine, photographic fixer, etchant, patina solutions, etc.

All unmarked or recycled containers containing hazardous materials (new, used or waste) at MassArt, must be labeled with a reasonable description of their contents (i.e. “mineral spirits”, “used developer”, etc.) and the hazard (i.e. “toxic”, “flammable”, and/or “caustic”). A simple self-adhesive label, or even tape, written on with a felt tip pen or “Magic” marker, is all that is necessary. For those who want something more formal, the school can supply special labels specifically designed for the kind of waste generated at MassArt. These may be obtained from any of our maintenance or custodial employees.
Special instructions on labeling hazardous waste containers will be found in Appendix A. Please call the Health and Safety Office (617-879-7939) if you need assistance or information.

Upholstered Furniture

Many pieces of upholstered furniture do not meet recent changes in the requirements for fire retardancy introduced by the fire department. Some of this material finds its way onto the MassArt campus in violation of fire prevention regulations. The potential for disaster is self-evident.

No visitor, student, staff or faculty at the Massachusetts College of Art may bring onto the premises any upholstered furniture unless it complies with the fire safety regulations of the Commonwealth of Massachusetts (i.e. conforms to the State of California Bureau of Home Furnishing Technical Bulletins 116, 117 and 133).

The possessor of privately owned furniture at the school that does not meet these fire retardancy rules, or that is not properly labeled, will be asked to remove it from school property. This includes privately owned furniture in Baker and Smith Halls. If this is not done within a reasonable length of time (i.e. two weeks) the furniture will be removed without further notice by school personnel. If, at the end of an additional two weeks, it is not reclaimed (and immediately removed from school property) by its owner, it will be demolished so that it cannot be used elsewhere.
SAFETY RULES FOR PAINTING STUDIOS

In order to better insure the health and safety of our students, the Painting faculty has agreed on the following standards that all students need to adhere to. This initiative means that some long standing traditions and practices had to be abandoned in order to improve the working conditions in our studios. The cooperation of all students is essential to maintaining a healthy environment.

The following rules apply to all Major's studios and elective classes in Painting:

- **NO SMOKING** in any studio or corridor of the Kennedy building painting area.
- **NO SPRAY PAINTS OR FIXATIVES** used anywhere in Kennedy (outdoors only).
- **NO HEATERS, HOT PLATES, OR OPEN FLAMES OF ANY KIND.**
- **NO MELTING OF WAXES OF ANY KIND.**
- **NO STORAGE OF FLAMMABLE MATERIALS** such as: hay, newspaper, oily rags, etc.
- **NO PASTELS OR CHALKS** may be used in any elective classroom. Pastels may only be used in Major's studios while wearing a dust mask, and only with the express permission of the major instructor and with the consent of the students working nearby.
- **NO SINKS** may be used to dispose of painting wastes. Solvent or media waste is to be disposed of in marked jugs only.
- **NO PAINTING RAGS OR TRASH** may be allowed to accumulate in studios. **NO BREAKABLE GLASS CONTAINERS** may be used to store solvents or mediums.
- **ODORLESS PAINT THINNER OR ODORLESS MINERAL SPIRITS** are the only solvents that may be used to thin paint or to clean painting materials. Other solvents such as; 'Citrisol', 'Turpenoid', Turpentine, lacquer thinner and plain (not odorless) mineral spirits are NOT allowed in any studio.
- The largest container of odorless mineral spirits allowed in 2D studios is 1 pint.
♦ All unused solvent or medium containers must be made of plastic or metal, clearly labeled as to exact contents, and stored in a container with a tightly closing top.
♦ Cleaning of brushes and palettes should be done with mineral oil (baby oil), 'Murphey's Oil Soap', and paper towels rather than with odorless mineral spirits.
♦ It is recommended that students wear disposable latex gloves while working with oil or acrylic paints of low toxicity simply to protect sensitive skin. Highly toxic paints (such as those containing chromium, lead, cadmium and zinc) should be used with caution, adequate personal protection, and under circumstances approved by the instructor.

ADDITIONAL PRECAUTIONS FOR PAINTING

Rules regarding access to Major's studios as outlined in the studio contract must be followed to prevent theft and vandalism. Studio keys must always be returned to the Security desk before leaving the building. Studio keys may not be copied by anyone - copying keys jeopardizes security for everyone!

Valuables such as money, cameras, and jewelry should never be left in an unattended room.
SAFETY RULES FOR THE PHOTOGRAPHY DARKROOMS

Prolonged and repeated exposures to photographic chemicals, as with any chemical substance, can lead to chronic health problems. The degree of risk depends on several factors: length of exposure, frequency and amount of exposure, toxicity of the materials, total body burden (the cumulative effect on the body of all the different exposures to any single chemical and other chemicals from various sources). Individual susceptibility must also be taken into account. Some people are more susceptible to harm from a particular chemical than are other people. High risk groups include smokers, heavy alcohol drinkers, and people with chronic diseases of the heart, lungs, kidney, and liver. Pregnant and lactating women are a very high risk group because even minute amounts of many chemicals may damage a fetus or be transmitted through the milk to the nursing child.

DARKROOM OPERATIONS

1. Use common sense. Pace yourself when working in the darkroom. Take regular outside rest periods so that intense, prolonged exposure to any potentially toxic materials is reduced.

2. Protect yourself from chemical absorption through the skin. Never put your hands into photographic chemicals unless you are wearing the appropriate gloves.

3. Do not splash chemicals. Splashing is a common cause of eye contamination. Gently place prints into each solution to prevent splashing.
4. Wipe up ALL SPILLS IMMEDIATELY TO PREVENT PEOPLE SLIPPING AND FALLING and to prevent chemical exposures by inhalation.

5. If you are mixing chemicals from powders or from liquid concentrates or if you are toning you must wear an appropriate respirator and safety goggles.

When mixing acids with water, always add the acid to water, never the reverse. When water is added to concentrated acids (such as glacial acetic acid used to mix a stop bath) a violent reaction may occur causing the mixture to boil and splatter about the room.

If you do get chemicals in your eyes, flush them with a gentle, constant flow of water for at least fifteen (15) minutes. Report the accident immediately to the technician or monitor on duty. Seek medical attention as quickly as possible after flushing the eyes.

6. Be sure that waste photo processing chemicals are discarded into the correct drains.

Photographic Waste

Many sinks in the Photographic Department on the sixth floor of the Kennedy Building have two drains: one for disposing of used processing chemicals and the other for waste water from washing prints and general clean-up.

The drains intended for used processing chemicals are easy to identify: they have a large funnel permanently attached to each drain’s inlet. These special drains are labeled to indicate their function.

It is important that waste photographic processing chemicals be discarded into these specially marked drains. This may be complicated by the fact that what particular
type of waste should be discarded into the special drains may change from time to time. For example, it may be necessary to discard used fixer separately from used developer and stop bath. So the fixer goes into separately marked barrels, and all other processing chemicals go down the special drain.

It is mandatory that the instructions on the labels attached to the drains, as well as disposal information posted on bulletin boards in the Department, be followed exactly. Failure to follow these instruction could result in a serious violation of state and federal environmental regulations. If you do not know exactly what to do then consult a technician or monitor before discarding any photographic waste down a drain.
SAFETY RULES FOR FILM, SIM AND VIDEO

EQUIPMENT SAFETY

1. Do not use attachments that are not recommended by the equipment manufacturer as they may cause hazards.

2. Do not use electrical or electronic equipment near water: for example, near a sink, or laundry tub, in a wet basement, or near a swimming pool, etc.

3. Don't place equipment on an unstable cart, stand, or table. The equipment may fall, causing serious injury.

4. Slots and openings in the cabinet of electrical or electronic equipment are provided for ventilation, and to insure reliable operation by protecting it from overheating. These openings must not be blocked or covered. Do not place the equipment on a bed, sofa, rug, or other similar surface or on or over a radiator or heat register.

5. The equipment should be operated only from the type of power source indicated on its label.

6. Most equipment is equipped with a 3-wire grounding type plug (a plug having a third, grounding pin). This plug will only fit into a grounding type outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact the electrician to replace the obsolete outlet. Do not defeat the safety purpose of the 3-wire plug by removing the grounding pin.

7. Do not crush, or walk on, the equipment's power cord. Do not locate equipment where the cord will be abused, such as in doorways or high traffic areas.
8. Follow all warnings and instructions marked on the equipment.

9. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

10. Never push objects of any kind into the equipment's ventilation slots as they may touch dangerous voltage points or short out parts. This could result in fire or electric shock. Never spill liquid of any kind on the equipment.

11. Do not attempt to service the equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards.

12. Unplug the equipment from the wall outlet and bring it to the technician immediately if:
   a) The power cord is damaged or frayed.
   b) Liquid has been spilled into the equipment.
   c) The equipment has been exposed to rain or water.
   d) The equipment does not operate normally by following the operating instructions. Adjust only those controls that have been discussed in class.
   e) The equipment has been dropped or damaged.
   f) The equipment exhibits a distinct change in performance.

13. Do not attempt to lift heavy equipment by yourself.

14. Turn the power switch off before plugging or unplugging a piece of equipment.

15. Keep equipment off the ground, if possible, to prevent accidental tripping.

16. Never eat or drink around equipment.
17. When using dry ice to create fog: make sure there is sufficient water to cover the heating elements, but not so much that it might spill or overflow (Approx. 1/3 full). Always wear gloves when handling dry ice. For the best effect break up the dry ice into small bits. Place these bits into a wire basket and gently lower into the hot water.

**STUDIO SAFETY**

1. Never eat, drink or smoke in the studio.

2. Do not overload individual electrical circuits.

3. Secure the camera to a tripod.

4. Avoid overcrowding the Studio area with people or objects.

5. Use appropriate heat resistant gloves when using studio lights.

6. Keep all cables clear of foot traffic and gaff them down.

7. Do not poke metal objects into the lighting board.

8. When hanging overhead lights or props be sure there is a safety chain attaching the device to the grid.

9. Avoid long shoots using an excessive number of lights.

10. Secure light stands and tripod legs with sandbags where needed.

11. Secure all audio microphone and boom stands in a similar fashion.

12. Never move a light while it is turned on. Be careful when moving freestanding lights as they are top-heavy.
13. Avoid lifting heavy equipment without assistance.

14. Do not stack monitors without proper support.

15. Always seek proper supervision when doing multiple camera shoots.

FIELD PRODUCTION

1. When shooting in the field always scout the area out for hazards from chemicals, fire, water, etc.

2. Always place the equipment in a safe area. Place equipment away from both performers and spectators. Secure all tripods and light stands with sandbags.

3. Be sure to gaff down cables.

4. Always use two people when using a separate deck/camera configuration. The camera operator cannot see outside the viewfinder so the deck operator must provide warning of approaching obstacles, cars, overhead cables, etc.

5. Avoid peering through the camera's viewfinder for long periods of time. Periodically switch from one eye to another, if possible.

6. Check all AC outlets for correct voltage and current. Always ask someone about the amperage and voltage for each circuit.

7. Never plug equipment into an outlet exposed to water or other liquids.

8. Always use safety chains when hanging lights or props.

9. Do not place lights near curtains or flammable objects.
10. Do not place lights in close proximity to your subject.

11. Do not place objects or gels directly on a light. Use a gel frame to attach gels and diffusion material.

12. Do not overcharge batteries. Always store them in a cool dry place.

**LIGHTS**

1. Make sure the lamp voltage matches the power source voltage. For example, never connect a 30V lamp to a 120V source.

2. Open faced lights should not be aimed at or positioned in close proximity to people, furniture, drapery, sets or flammable materials.

3. Ultraviolet light ray emissions can cause damage to the eyes and skin. The likelihood of either occurring is increased with the length of exposure, focus intensity and proximity.

4. A wire scrim is recommended in the event of a defective lamp exploding. Where this is not possible, lights should be kept a suitable distance from the subject.

5. Do not interfere with ventilation by covering the lights in anyway, except with properly installed gels, diffusers or scrim.

6. Do not close the barn-doors all the way when the light is turned on.

7. Do not replace or remove lamps. This should be done by the technician. Never touch lamp glass, as the oil in your hand may cause the lamp to explode.

8. Use only the power cable supplied with the lamp.
9. Make sure all the sections of the light stand are tightened.

10. Do not overextend the stand.

11. When extra height is needed, use sandbags to secure the stand.

12. Do not engage in hanging lights while people are underneath. Use safety chains when lights are hung overhead.

13. Use the proper device for the effect you want.

14. Know the maximum wattage or amperage each circuit can handle.

15. Check the wattage or amperage of each device to avoid overloading circuits.

16. Make sure that lighting devices are hung properly and are well ventilated.

17. Do not over-tighten the securing bolts on lighting devices.

18. Wear gloves when focusing and adjusting lighting devices.

19. Be careful when adjusting or focusing devices after they have been operating. The 500 and 1000 watt lamps generate a lot of heat. They can cause severe burns. Rough handling may cause bulbs to explode.

20. Make sure the connecting cables are large enough for the power requirements.
21. Most of our theater lighting instruments have asbestos insulation with a double coating of vinyl insulation. DO NOT EAT OR DRINK WHILE HANDLING THESE DEVICES. Always wash your hands when you are done.

EDITING

1. Avoid long working sessions at the editing monitors.

2. Do not force or stick anything into the video decks.

3. Take frequent breaks to avoid back and eye strain.

4. Avoid static sparks by momentarily grounding yourself to a radiator, pipe, etc., before touching the controls of the editing equipment.

5. Do not attempt to repair defective equipment. Request assistance from the technician or monitor when you are having problems with the equipment.

6. Do not eat, drink or smoke while you are editing.

LADDERS AND SCAFFOLDING

1. Make sure the ladder you use is in good condition with no bends or creases in the frame.

2. Use caution when working on scaffold platforms. Move about them slowly. Remove or secure any tools or lighting devices before moving a scaffold to another work area. DO NOT MOVE A SCAFFOLD WITH PEOPLE ON BOARD.

3. Make sure all cross braces are tightened into place.

4. Lock the scaffold’s wheels before climbing.
5. Always climb up scaffolds from the inside to prevent an imbalance that would cause it to tip-over.

6. Using a hoist line to pull up items is much safer than climbing a scaffold or ladder with your hands full.
SAFETY RULES FOR WOODSHOP, METALS, SCULPTURE, AND FOUNDRY

GENERAL PRECAUTIONS

1. **KEEP YOUR WORK AREA CLEAN. CLUTTERED AREAS AND BENCHES INVITE ACCIDENTS!**

2. Do not work by yourself. Have someone else with you at all times in the studio or shop.

3. Wear proper apparel. Do not wear loose clothing, gloves, necklaces, rings, bracelets or other jewelry that may get caught in moving parts. Bare feet are not allowed in any studio or shop. Sandals, open-toe shoes, or high heels should not be worn. Non-slip safety shoes are recommended. Wear protective hair covering to contain long hair.

4. Always use safety glasses. Use a dust mask if a cutting operation is dusty. Use a properly selected respirator where toxic fumes may be generated.

5. Do not work or operate tools while under the influence of drugs, alcohol, or medication.

6. Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lighted.

7. Keep children and visitors out of work areas.

8. Report any problems with tools to the technicians. Do not repair tools or replace blades, bits, etc., unless you have been authorized and trained by the technician.

9. Make your workshop tamper-proof (and child-proof at home) with padlocks, master switches, and by removing starter keys.
10. Return all tools to designated storerooms or tool rooms.

**CARE OF EQUIPMENT**

1. You may not operate any tools or equipment without prior instruction from instructors or technicians.

2. For your own safety, read the instruction manual before operating a tool. Learn the tool's applications and limitations, as well as the specific hazards peculiar to it.

3. Keep guards of power tools in place and in working order.

4. Electrically ground all tools where required. If a tool is equipped with a three-prong plug, it should be plugged into a three-slot electrical receptacle. If an adapter is used to accommodate to a two-slot receptacle, the adapter must be attached to a known ground. **Never remove the third prong from a plug.**

5. Remove adjusting keys and wrenches before operating equipment. They can become lethal projectiles.


7. Disconnect tools before servicing or when changing accessories such as blades, bits, cutters, etc.

8. Consult the owner's manual for recommended accessories and use them. The use of improper accessories may cause hazards.

9. Report all damaged or inoperable equipment to the studio technician. **DO NOT USE DAMAGED EQUIPMENT.**
OPERATION OF EQUIPMENT

1. Don't force a tool. It will do the job better and be safer at the cutting speed for which it was designed.

2. Use the right tool. Don't force a tool or attachment to do a job for which it was not designed.

3. Secure your work. Use clamps or a vise to hold your work. This is safer than using your hand and leaves both hands free to operate the tool.

4. Don't overreach. Keep proper footing and balance at all times.

5. Avoid accidental starting. Make sure switch is in the "OFF" position before plugging in the power cord. Do not use equipment that is tagged or labeled as inoperative or under repair.

6. Never stand on a tool. Serious injury may occur if the tool is tipped or if the cutting edge is accidentally contacted.

7. Feed work into a blade or cutter only against the direction of rotation of the blade or cutter.

8. Never leave a tool running unattended. Turn off the power. Don't leave a tool until it comes to a complete stop.

9. Make sure a tool is disconnected from the power supply while a motor is being mounted or repaired.

10. Be sure you have been instructed in and approved for the use of any piece of equipment you intend to use.
SPECIAL GUIDELINES FOR METALS STUDIO OPERATIONS

SPECIFIC HAZARDS

Metalsmithing, jewelry making, and enameling utilize a broad range of processes and materials, many of which can be a serious risk to the unprepared or unprotected:

- Cutting, filing, and sanding can create dusts which are often harmful.
- Soldering, brazing, enameling, and melting metal create toxic fumes. The infrared light from these processes can also be a threat to vision.
- Repetitive hammering required for metalsmithing can be a serious threat to hearing, as well as repetitive motion disorders.
- Corrosives for cleaning, etching, and patination must be handled with extreme caution.

With this in mind, metals students should have: safety glasses, approved dust mask or respirator, rubber gloves, and hearing protection.

VENTILATION

The following areas in the metals studio have special ventilation devices that must be turned ON when work is in process:

- Soldering
- Annealing
- Casting
- Etching
- Patinas
- Belt Sanding
- Sand Blasting
- Enameling
- Kiln Firing
- Polishing

There is a master control switch for ventilation located in the studio’s machine room. Other equipment in the studio...
may have individual ventilation controls. Check with the studio technician or instructor for the location of the various controls and their operation. Be sure to keep the ventilation in operation during any metal working process for that particular area and turn it off before leaving the studio.

PROCEDURES FOR OPERATING TORCHES

Bench torches are supplied with natural gas and oxygen. The system consists of torches set up for operation at sixteen work stations in the studio. An oxygen regulator and a valve for natural gas are located under each work station bench and should be adjusted only by the studio technician or an instructor.

Each work station has an “ON/OFF” valve located on the top of the bench. When the valve handle is VERTICAL the valve is OFF and when it is HORIZONTAL the valve is ON. This valve is the primary method of for students operating the torches.

- Students MUST shut OFF their bench torch when leaving the area,
- No torch may be left in its “holster” (holder) while turned ON.

The torch system operates from a single large gas supply line. Special backflow prevention devices, called “Aqua Valves” are located under and behind the benches. Occasionally, when it is unusually hot and dry, the water in the aqua valves may evaporate, causing the natural gas to bypass the torches and be vented outdoors. If this happens, the gas odor may drift indoors into the studio and the studio technician or instructor will shut down the entire system as a safety precaution.
At the far left (North) end of the benches is the main ON/OFF for the system’s oxygen and gas supply. These valves control only the torches at the sixteen work stations. The valves are OFF when the handles are VERTICAL and are ON when HORIZONTAL (just like the individual work stations). It may be necessary to use a pair of pliers to operate these before you can operate a torch at a work station.

OTHER GAS TORCHES

In addition to the work stations mentioned above there are two Oxygen/Mapp gas rigs and eight Acetylene gas rigs in the studio:

- The Oxygen/Mapp gas rigs are on rolling carts and are the largest tanks in the studio. They are used primarily for annealing large work pieces and for casting. These tanks should NOT be moved about - the carts are only used to transport tanks while being refilled. Each tank has a main control valve at its top and a regulator that adjusts the gas pressure in the hoses and torch. Be cautious while operating the valves and regulators since they are VERY expensive to replace.

- The acetylene gas rigs are the most commonly used torches in the metals studio. Each tank has a main control valve on its top and a pressure regulator. There are several types of tips that may be attached to the hand-held torch to vary the diameter of the flame.

COMMON OPERATION

It is important to know that ALL the Oxygen/Mapp gas and Acetylene gas rigs operate the same way:

- All tanks or cylinders have a main ON/OFF valve at their top, and are directly part of the tank (i.e. there is
no intervening hose). These open when turned left and close when turned right. Remember - “Left is Loose” (Open or ON) and “Rightly is Tightly” (Closed or OFF)

• Pressure regulators are connected to each tank valve to control the pressure and flow of gas through the hoses to the torch. The regulators operate OPPOSITE from the way the valves do. To create more flow or pressure turn the regulator handle left (“Lefty is Tightly) and to create less flow or pressure turn the handle right (“Rightly is Loose”).

• Regulators have two gauges attached. One, on the tank side of the regulator, shows the TANK pressure (or amount remaining) and the one on the torch side of the regulator shows the GAS pressure in the hose and torch. These gauges are helpful in judging when tanks need to be replaced and for getting consistent results (i.e. the same pressure setting can be used when you find the right settings).

SAFETY EQUIPMENT

An emergency shower and eyewash is located at the center of the main studio. Pull the chain down to operate the shower and the lever up to work the eyewash. These are the main first aid for chemical splashes and clothing fires:

• If they must be used then remove ALL contaminated clothing (including shoes if necessary) to prevent recontaminating the area affected - this is no time to be modest - prompt action can mitigate what would otherwise be a catastrophic injury.

• Wash the affected area for a minimum of 15 minutes, no matter how uncomfortable. The more water that is used the more contamination is washed away. Don’t worry about water on the floor - that is a minor problem in an emergency of this sort.
• Have someone call the Campus Police (617-879-7800) and seek medical help immediately.

REMEMBER TO BE CAREFUL AND ASK PLENTY OF QUESTIONS WHEN WORKING IN THE STUDIO.
SPECIAL GUIDELINES FOR SCULPTURE STUDIO OPERATIONS

1. Certain materials used in sculpture have toxic properties. The hazards of silica and asbestos are well documented, and these substances are found in some stones and clays. Some metals, when heated, give off fumes which can cause fevers, headaches and nausea.

2. In the casting process, metal is melted and poured into a suitable negative mold. The fumes of many of these metals and alloys are toxic. This is especially true of the lead found in brass and pewter. In addition, lead is sometimes added to molten bronze. Inhalation of these fumes can cause lead poisoning.

3. The sand used in the shell-molding process has a high silica content and the dust should not be inhaled.

4. In the lost wax process, the fire-resistant plaster or clay used as a negative mold contains many additives which are hazardous. This includes solvents, acids and silica flour, which can cause rapidly developing silicosis.

5. A major concern in casting is the large amount of heat released. Use of special foundry clothing is required during all pours.

ELECTRICAL EQUIPMENT AND CONNECTIONS

1. Never remove the ground pin from extension cords or equipment. If you come across an ungrounded outlet, CONTACT THE FACILITIES DEPARTMENT. If it is necessary to use a 3-pin to 2-pin adapter, ensure it is properly grounded by attaching it to the receptacle’s face plate.
2. Before using a studio space, be aware of how much electrical power is available in that space and what your power requirements will be.

3. Use the proper size cable to handle the current running through it.

4. Ask for assistance if you are not familiar with determining the power you need, the capacity of cords, etc. Never undertake electrical repairs. This is a procedure for professionals. CONTACT THE FACILITIES DEPARTMENT.

5. If something starts to smoke or cause sparks, unplug it from the power source. Label it with a warning of the defect and report the incident to the technician.

6. Electricity and water do not mix. Stay clear of water puddles when working with electricity.

7. Never bypass a circuit breaker or fuse at either the power source or on the equipment.

8. Extension cords should be adequate for the attached load. Household extension cords (of the “zip cord” type) are not adequate for studio use and must not be used.
SAFETY RULES FOR THE GLASS STUDIO

GENERAL PRECAUTIONS

1. Use proper safety glasses that are ultraviolet and infrared rated for hot glass.

2. Do not wear synthetic clothing or open-toed shoes in the glass blowing area.

3. Tie back long hair and make sure you have no loose clothing while operating any machine.

4. Do not work by yourself. Have someone else in the shop with you at all times.

5. Do not work under the influence of any drug, alcohol, or medication.

USE OF EQUIPMENT

1. If in doubt about the proper use of any equipment, please ask questions of the technician, instructor, or monitor on duty.

2. Only authorized personnel are allowed to operate furnaces and controls.

3. Turn off all machinery and water valves before you leave.

4. Use approved respirators in the sand blasting area.

5. Properly clean each work area before you leave.

6. Wet vacuum the floors when finished. Sweeping creates free silica dust.
SAFETY RULES FOR THE CERAMICS AREA

GENERAL PRECAUTIONS

1. Keep work areas clean. Cluttered areas invite accidents.

2. Wear proper apparel. Coveralls or a jumpsuit over your regular clothing is appropriate. Do not wear loose clothing, rings bracelets or other jewelry that can get caught in moving parts (such as a spinning potter’s wheel). Non-slip footwear is recommended. Use barrier cream on your hands while working with clay. Wear rubber gloves when mixing or using glazes.

3. Electrically ground all equipment. If equipment has a three-prong plug, it should be plugged into a three-slot receptacle. If an adapter is used to accommodate a two-slot receptacle, the adapter must be attached to the receptacle's face plate. Never remove the third prong of a plug.

4. Gloves must be worn in the glaze lab.

5. Respirators must be worn in the glaze lab and clay mixing areas.

6. Respirators must be of the correct type, fit properly and be well maintained.

7. Each student must keep a notebook of safety and health hazards, hand-outs, periodical information, etc.

8. Materials and belongings must be stored above floor level so that all floors can be regularly and thoroughly cleaned.
9. No dry sweeping is allowed in the ceramic area. Wet mopping or wet vacuuming are the only ways to clean floors.

10. Wear protective clothing during clay mixing. Wash the protective clothing separately from other street wear clothing.

11. No eating, drinking or smoking is allowed in ceramics areas.

12. Fire-resistant clothing must be worn by all participants in Raku firings.

PERSONAL SAFETY AROUND KILNS

1. Loose clothing and hair can easily catch fire. Be careful, particularly with Raku firing!

2. Use only the specifically designated kilns for Raku firing or other processes that generate visible smoke. This will prevent false fire alarms.

3. Assume anything on or around a kiln is HOT.

4. Keep your face and hands back from spy ports.

5. Be careful looking into a yellow-hot kiln. The radiation may damage your eyes and even some types of glasses. Ultraviolet and infrared rated safety glasses are a good idea for everyone, and they make the pyrometric cones easier to see.

6. If you are exposed to excessive heat for long periods, drink lots of liquids, and eat a bit of high energy food, such as candy, every so often.
7. A kiln with a reduction atmosphere produces some carbon monoxide. If you start to feel dizzy GET OUT OF THE KILN ROOM AND SEEK MEDICAL HELP IMMEDIATELY.

8. Alcohol, drugs and medication impair control of the firing and clear thinking in case of a problem or emergency.

KILN SAFETY

1. Check the structural condition of the kiln before any firing. Report any problems to the instructor or technician.

2. Clean the kiln before and after the firing.

3. Make sure the stacking of ware is stable and level.

4. Do not leave combustible materials anywhere near kilns.

5. Only students who have been authorized by an instructor may sign up for and fire kilns.

6. Never touch controls or make adjustments to kilns that you are not firing.

7. Exhaust fans must be turned on during all firings.

8. Kiln shelves and stilts must be returned to proper storage.

9. Respirators and goggles must be worn when chipping and washing kiln shelves.
SAFETY RULES FOR THE FIBERS AREA

1. For your own safety, read instructions for each course before beginning work. Understand the specific hazards peculiar to each medium and the operation of tools and machinery before using them. If in doubt, ask an instructor or monitor for help.

2. Protect yourself from chemical absorption through the skin and inhalation of toxic dye vapors and fumes, by wearing proper apparel: apron, rubber gloves, respirator and non-slip footwear when appropriate. Respirators must fit properly and be well maintained. Make sure you are using respirators that are equipped with the appropriate filter cartridge (acid gas/organic vapor filter cartridge for hot water dyes). When not in use, respirators must be stored in a sealable, airtight ("Ziploc") plastic bag.

3. Keep work areas clean. Rinse off the tabletop, stove, washer and dryer, sink, etc. before leaving the studio to avoid contamination of dyes. Also mop floors. Avoid clutter in studios.

4. Keep visitors away from machinery and dye areas.

5. For security and safety, keep doors and cabinets locked when not in use.

6. Each student must keep a notebook of safety and health hazards, handouts, periodical information, etc.

7. An exhaust fan must be used when using acid dyes or cooking plant pulp or using wax with batik.

8. Do not work in the studio when under the influence of drugs, alcohol or any medication. Hot waxes, toxic dyes, and operating machinery pose particular problems in these situations.
9. Ingestion is a major cause of bodily contamination. Therefore, no food, drink, or smoking is allowed in the Fiber Studios. Also, do not store food in the refrigerator, which is reserved for dyes and paper pulp only.

10. When mixing acids with water, always add the acid to the water, never the reverse.

11. Electricity and water do not mix: stay clear of water puddles when working with electricity (i.e. vacuum table, blenders, etc.).

12. Never leave a stove, beater, mixer or hot wax equipment unattended.

13. Do not put paper or other combustible materials on or near the stoves when they are in use.

14. Only students who have been authorized by a Studio Manager or instructor may use the Hollander beater in papermaking.
SAFETY RULES FOR ART EDUCATION STUDIOS AND CLASSROOMS

1. Art education students are encouraged to work with non-toxic materials whenever possible.

2. Art Education students must at all times think about safety implications when working with their students.

3. Since Art Education students use many materials and processes, all rules of this booklet apply!
Appendix A

HAZARDOUS WASTE DISPOSAL PROCEDURES

A. INTRODUCTION

It is the policy of the College that all federal, state and municipal regulations pertaining to hazardous waste shall be followed in all details.

Since these rules are complex and vary from time to time it is essential that all persons involved in this process follow the same procedures. These procedures are outlined below. If there are any questions, they should be directed to the Health and Safety Officer or, if he is not available, to the Director of Facilities.

B. RESPONSIBILITY

By law, the person who generates the waste is responsible for its proper handling until it is reacted, incinerated, or otherwise discarded in accordance with the law. This responsibility cannot be delegated. In most instances it is a personal responsibility; meaning that not only is your institution responsible for proper disposal, but you, as an individual, are also responsible.

Thus, it is important that:

1. You know the exact identity of the discarded material,
2. You keep accurate records of what you are doing,
3. You deal only with properly authorized contractors, and
4. You do not "sign" documents with other people's names.

Remember that you have the right to refuse to handle any material whose origin, description, appearance or packaging is questionable. Should you have any doubts or concerns about an item you have been asked to handle you should immediately contact the Health and Safety Officer or, if he is not available, the Director of Facilities.
C. PERSONAL PROTECTIVE EQUIPMENT

Depending on the nature of the material to be handled some or all of the following items of personal protective equipment should be available:

1. Hard hat,
2. Safety glasses and/or face shield/splash goggles,
3. Chemically resistant gloves and sleeve protectors,
4. Chemically resistant apron,
5. Lab coat or utility (work) clothes,
6. Safety shoes, and
7. Respirator.

You should consult with the Health and Safety Officer in the selection of personal protective equipment that is appropriate for the material being handled. This is especially the case for respirators since it is often necessary to perform some sort of air monitoring before the most efficient respirator is selected.

D. SUGGESTED EQUIPMENT AND SUPPLIES

Experience has shown that some or all of the following equipment and supplies should be on hand during the collection and packing of waste:

1. Four-wheel cart and/or two-wheel dolly,
2. Polyethylene bags (of the "Ziploc" type),
3. Self-adhesive labels,
4. Marking pen (of the "Magic Marker" type),
5. Note pad and pen/pencil,
6. Masking tape or duct tape,
7. Miscellaneous wide-mouth polyethylene jugs with caps,
8. Paper towels (or disposable baby diapers),
9. Various funnels, and
10. Vermiculite or solvent absorbent (of the "Speedi-Dri" type).

Many of these items can be supplied by the disposal contractor, but there is usually a substantial fee for them. So it is better to have your own materials on hand.
E. SCHEDULING A PICKUP BY THE WASTE DISPOSAL CONTRACTOR

Hazardous waste disposal contractors are licensed by both the Commonwealth of Massachusetts and the U.S. Government. To ensure competitive pricing, contractors used by the College are selected from a list of approved vendors published by the Massachusetts Higher Education Consortium (MHEC). A contractor suitable for the waste to be disposed of will be selected from this list by the Health and Safety Officer or Director of Facilities.

A request for the collection and disposal of waste should be made to the Health and Safety Officer at least two weeks (preferably three) in advance of the desired collection time. This request must be accompanied by an accurate description of the waste, such as the following:

“2 each 50-gallon drums of rags impregnated with paint solvent”,

“1 each 50-gallon drum of used paint solvent (Thin-X, etc.”),

Bulk wastes, such as the above mentioned 50-gallon drums, must be “profiled” (i.e. legally described) by the waste contractor. If the particular waste in question does not have an existing “profile” on record in the Health and Safety Office then it may be necessary for the contractor to examine it and analyze samples. This may take several weeks, so include such necessary delays in your timing.

F. MIXING VARIOUS WASTES

Consolidating waste (i.e. combing various wastes into a bulk container) should be done with care. Certain wastes (such as chlorinated solvents) cost five to ten times more to incinerate than an equal amount of other kinds of waste. Even a few ounces of chlorinated waste in a 55-gallon drum of an otherwise lower cost material requires that the more expensive disposal procedure be used for the entire drum. If the waste is actually located in smaller containers (one-pint cans, one-gallon jugs, etc.) it may be best not to
consolidate it with others. This is especially true if the waste material is, in fact, unused or surplus material in its original, labeled container.

Other kinds of waste may be incompatible with each other and should not be mixed together. In addition to the obvious case of indiscriminately mixing acids with bases is the more dangerous one of mixing organic materials (i.e. hydrocarbons) with oxidizers.

If this is done, sufficient chemically bound oxygen may be available to cause the hydrocarbon to catch fire, even in the absence of an external air supply. A classic example of this is mixing xylene or toluene (commonly used paint or ink solvents) with nitric acid (commonly used in printmaking). The resulting exothermic reaction is almost sure to ignite, or even explode, after a few minutes to several hours. So please consult with the Health and Safety Officer before mixing various materials.

G. WASTE CONTAINERS, LABELS, ETC.
The waste disposal contractor will not return containers transported to the disposal facility, so all containers removed from the College are gone forever so far as you are concerned. If the waste is collected and temporarily stored at the College in a reusable container (such as a safety can with self closing lid) it should be transferred to a disposable container if you wish to keep the expensive reusable container. Contact the Health and Safety Officer for information on suitable disposable containers.

Transfers to a disposable container should be done before the waste contractor arrives. Not only is it expensive to have the contractor's personnel do this simple chore (they are paid by the hour while on the premises), but you may actually double the number of containers used (six gallons in a safety can will be poured into 2 five-gallon closed buckets and disposed as if it were 10 gallons). Do not forget to wear suitable protective equipment (gloves, goggles, respirator, apron, etc.) while performing the transfer.
The general requirements for containers are:

1. Containers must be accurately labeled. Use a brand name (Thin-X, Kodak Dektol Developer, etc.), a well known common name (turpentine, linseed oil, etc.) or a chemical name (copper sulfate solution, ferric chloride, etc.). Do not use jargon or nick names (i.e. "used solvent" or "gunk").

2. All containers must have closed, drip proof caps or lids. Solid or granular material should be secure against spillage by using tied bags inside a cardboard carton, etc. Rubber stoppers, corks, tinfoil, or other temporary closures are not acceptable for transport.

3. Keep the exterior of all containers reasonably clean. Containers with encrusted or suspicious looking material on the outside, or that are damaged, leaking, etc., will be "overpacked" regardless of the actual hazard. The waste transporter has no choice in this matter, it is the law.

H. THE ACTUAL COLLECTION OF WASTE

A knowledgeable technician, supervisor, or faculty member from the department producing the waste should be present to assist when the disposal company picks up the waste. Custodial services, maintenance, or other departments who were not responsible for generating the waste are not acceptable substitutes.

It is important that a contact person (and that person’s phone number) be known to the disposal contractor.

While the disposal company’s personnel are engaged in the packing of the material, the generating department’s representative should remain available to assist in the identification of the various waste materials. This will assist in ensuring the final packing list generated by the disposal company is accurate.
At the end of the packing, the Health and Safety Officer will sign various documents required by state and federal regulations. These are used to document the proper transport and disposal of the waste. If you desire information on when and where your material was eventually disposed of, then contact the Safety Office (617-879-7939) approximately 30 days after it is picked up by the hazardous waste contractors.
Appendix B

FURTHER READING


Artists Beware, by Michael McCann, Lyons & Burford, New York City, 1992, ISBN 1-55821-175-6, about $30.00. Written by the founder of the Center for Safety in the Arts (New York City). An exhaustive collection of safety information especially organized from the artist’s perspective. Specific topics include hazards (by chemical class: liquids, fumes, etc.), studio ventilation, first aid; with separate chapters on various art mediums (painting, photography, etc.)

Rapid Guide to Hazardous Chemicals in the Workplace, 3rd Ed., Richard J. Lewis, Sr. (Editor), Van Nostrand Reinhold, New York City, 1994, soft cover, ISBN 0-442-01756-6, about $19.50. Basic safety information on about 800 chemicals in common use, including such artist’s materials as turpentine, naphtha, mineral spirits, etc. Includes a simple health hazard rating system, common synonyms, exposure limits, and plain language safety profiles. Useful for the general user, for whom the more specialized (and expensive) guides for the safety professional may not be helpful.

(NIOSH) Publication No. 90-117, about $7.50 in any U.S. Government bookstore. Key safety information in tabular form for 398 chemicals. Includes official U.S. Government exposure limits as well as specific information on personal protective equipment (gloves, types of respirators, etc.). Handy spiral bound paperback. Requires careful study of footnotes and list of abbreviations to obtain maximum utility.


General Notes on Dying, by Prof. Ann Wessman, Fine Arts 3D Department, Massachusetts College of Art, Boston, 1984.*

* These items are available from the Fine Arts 3D Department, Massachusetts College of Art, 621 Huntington Avenue, Boston, MA. 02115
Appendix C

SOURCES FOR SAFETY PRODUCTS
(Companies that carry a broad line of safety products)

Industrial Protection Products, Inc.
220 Ballardvale Street
Wilmington, MA 01887
Tel.: 978-657-4740

AirGas Safety
128 Wharton Rd.
Bristol, PA 19007
Tel.: 1-800-827-2338

Lab Safety Supply
401 South Wright Road
Jamesville, WI 53546
Tel.: 1-800-356-0722

Fisher Scientific
2000 Park Lane
Pittsburgh, PA 15275
Tel.: 1-800-766-7000

Safety Source Northeast
P.O. Box 125
Boston, MA 02134
Tel.: 1-800-225-3553
All of the above local or national companies are listed here solely for the reader's convenience. Their inclusion on the above list should not be considered an endorsement or recommendation by the Massachusetts College of Art. All these companies publish illustrated catalogs showing many different brands of products. Each company has its own requirements for minimum orders, establishing an account, credit card use, etc.
**Help Lines**

**AIDS**
AIDS Action Committee
Hotline Number .......................... 617-536-7733
Main Number .............................. 617-437-6200

Massachusetts General Hospital Walk In Clinic
.................................................. 617-726-2748

Fenway Community Health ............. 617-267-0900

**ALCOHOL AND DRUG ABUSE**
24 Hour - referral or just talk:
Alcohol Line ............................... 1-800-252-6465
Alcoholics Anonymous ................. 617-426-9444
Narcotics Anonymous .................. 413-538-7479
Boston Medical Center Alcoholism Clinic 617-534-5554

**DEPRESSION, DESPAIR, LONELINESS, SUICIDE**
The Samaritans
24 Hour Hotline Number ............... 617-247-0220

MDDA, support group for depression and manic Depression ............................ 617-855-2795

American Suicide Foundation ........... 617-439-0940
**EATING DISORDERS**
Anorexia/ Bulimia/ Compulsive Eaters
Anorexia/Bulemia Assoc. of RI ………  401-861-2335
Overeaters Anonymous………………….781-641-2303

**GAY, LESBIAN, BI-SEXUAL HOTLINE**
Fenway Community Health
Hotline Number ……………………………617-267-0900

Bisexual Support ……………………..617-927-6032

**RAPE**
Boston Area Rape Crisis Center ……..  617-492-7273

Beth Israel Hosp. Main Number ……..  617-667-7000

Beth Israel Hosp. Rape Crisis Services...617-667-8141

Survivors of Incest Anonymous ………… 410-893-3322

**REFERRAL SERVICES**
MA Psychological Association
Referral to a psychologist or therapist
Referral line ……………………………781-263-0080

National Association of Social Workers
Therapy referral service ………………… 617-227-9635

**REPRODUCTIVE SERVICES**
Planned Parenthood …………………... 617-616-1600

MGH Back Bay Health Center …………. 617-267-7171
SMOKING CESSATION
American Cancer Society .................. 617-556-7400

VIOLENCE
Battered Women’s Hotline ................. 617-661-7203
Boston Police Domestic Violence Unit... 617-343-4350
Fenway Community Health .............. 617-267-0900

AT MASSART
Counseling .................................. 617-879-7760
Health Services ............................. 617-879-7760
Public Safety (Campus Police Admin.)... 617-879-7810
The Student Center ....................... 617-879-7712
Campus Police Emergency .............. 617-879-7800