Art Studio Safety Program

UNIVERSITY OF NEW MEXICO
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UNM's Commitment to Safety

Safety is a core value of the University of New Mexico. UNM is committed to creating and fostering a culture of safety within the community. To learn more, visit https://ehs.unm.edu/culture-of-safety.html.

Definitions

Art Studio	A designated space within the University of New Mexico (UNM) where artistic activities, including but not limited to ceramics, printmaking, sculpture, Small Metals, and photography, take place.
Chemical Hazards	Hazards associated with using and storing various chemicals, including flammable liquids, flammable gases, corrosive liquids, oxidizing agents, and toxic chemicals.
Environmental Health & Safety (EHS)	The department responsible for reviewing, updating, and distributing safety programs, conducting inspections, providing trainings and guidance, and coordinating the disposal of chemical waste at UNM.
Equipment Hazards	Hazards associated with the use of specific equipment or machinery, such as power tools, welding/soldering torches, metalworking machinery, sharp tools and edges, lithography presses, pottery wheels, and kilns.
Fine dust and airborne particles	Tiny particles generated during various art processes, which can be inhaled and potentially cause respiratory issues.
Hazard Identification	The process of recognizing and documenting potential hazards in art studios, including chemical, equipment, and physical hazards, to ensure appropriate measures are taken to mitigate risks.
Hazard Mitigation	Actions taken to reduce or eliminate the potential risks associated with identified hazards, including implementing safety protocols, training, and using appropriate control measures.
Personal Protective Equipment (PPE)	Protective gear, such as safety glasses, splash goggles, gloves, N95 masks, respirators, lab coats, aprons, and coveralls, designed to minimize exposure to hazards and prevent injuries or health risks.
Physical Hazards	Hazards not directly related to chemicals or equipment, including noise, respiratory hazards (such as airborne particles), eye hazards (such as sparks or flying fragments), electrical hazards, and ergonomic hazards.

Safety Data Sheets (SDSs)	Documents that provide detailed information about hazardous chemicals, including their properties, handling precautions, health effects, and emergency response procedures.
Standard Operating Procedures (SOPs)	Written instructions that include the specific steps of an activity or process, the hazards, and how to protect yourself from those hazards.

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INTRODUCTION

Safety is a core value of the University of New Mexico (UNM) and UNM leadership is committed to creating and fostering a culture of safety within the University community. Part of demonstrating this commitment is providing guidelines and resources that are specific to activities and materials used in art studios. This program focuses on hazard identification and hazard mitigation measures that are relevant to art studios.

There are a variety of different art studios at UNM. Within each of these spaces are hazards that are unique to the activities conducted there. This program is intended to address these unique hazards and to set forth general safety protocols for occupants of these spaces. This document is intended to be used as a reference and is not a substitute for task-specific and/or on-the-job training.

1. SCOPE AND APPLICABILITY

This safety program applies to all faculty and staff who work in art studios at the University of New Mexico (UNM), including branch campuses. Visitors who are temporarily using these spaces are also expected to be aware of and abide by this program.

2. RESPONSIBILITIES

2.1. Environmental Health & Safety (EHS) is responsible for:

- Reviewing this program periodically and updating as needed
- Distributing up-to-date versions of this program to appropriate Department Chairs

- Monitoring compliance with this program via annual inspections
- Providing training, hazard assessments, and guidance on art studio safety
- Coordinating the pickup and disposal of chemical waste generated in these spaces
- Maintaining a list of all Studios on campus.

2.2. Department Chairs are responsible for:

- Distributing this program to all art studio faculty and staff
- Ensuring departmental compliance with this program

2.3. Supervisors and Managers of Art Studios are responsible for:

- Developing Standard Operating Procedures (SOPs) (training materials) that address the hazards specific to their studio and the safety measures required to protect users from the hazards
- Ensuring users (including visitors) have read and signed the SOPs/training materials before being granted access to the studio. EHS can assist with training if needed.
- Ensuring compliance with SOPs via supervision of studio users
- Knowing what to do in the event of an emergency (chemical spill, chemical exposure, injury, fire, etc.) via an up-to-date emergency plan and contact list
- Maintaining accessible copies (hard or digital) of Safety Data Sheets (SDSs) for all hazardous chemicals used in the studio
- Providing access to their studio for the annual inspection by EHS
- Reporting accidents, injuries, chemical exposures, and near-misses to the department chair and EHS

2.4. Employees and Students Using Art Studios are responsible for:

- Familiarization and compliance with safety policies and guidelines
- Participation in safety training provided by their studio manager, EHS, and/or Learning Central
- Proper use of equipment and tools
- Reporting observed hazards, incidents, injuries, or unsafe conditions to their supervisor
- Wearing and maintaining the required PPE provided by the studio
- Maintaining a clean and organized workspace and following proper waste disposal procedures
- Familiarization with emergency procedures and how to respond appropriately

NOTE: All stakeholders have the right to STOP WORK if an unsafe condition arises within the work environment.

3. Art Studio Hazard Identification

It is imperative that art studio faculty, instructors, staff and students understand the hazards inherent in the materials and processes used in their work. Knowing the hazards, and how to protect yourself from the hazards, will reduce incidents and injuries in art studios. The most effective method of identifying and mitigating hazards is to create Standard Operating Procedures (SOPs) for activities that involve

hazardous materials and/or processes, and use the SOPs as training documents. To facilitate this, EHS has a variety of SOP templates and EHS staff can provide guidance on how to create SOPs. Example SOPs, which can be used as templates, are included as Attachments 1 and 2.

Typical hazards found in art studios include:

3.1. Chemical Hazards

3.1.1. Flammable Liquids

- Solvents such as acetone, ethanol, isopropyl alcohol, paint thinner, lithotine, turpentine, etc. are all capable of igniting and causing a fire.
- Linseed oil saturated rags and towels are particularly dangerous, as they can spontaneously combust as they dry; rags with linseed oil have caused many fires due to improper storage.
- Aside from fire hazard, flammable liquids are often Volatile Organic Compounds (VOCs) which may be toxic, carcinogenic, teratogenic, and may increase the likelihood of stroke and cardiovascular mortality. Always use flammable liquids in a well-ventilated area.

3.1.2. Flammable Gases

- Acetylene gas is highly flammable and capable of causing fires
- Aside from fire hazards, flammable gases are often VOCs which may be toxic, carcinogenic, teratogenic, and may increase the likelihood of stroke and cardiovascular mortality. Always use flammable gases in a well-ventilated area.

3.1.3. Corrosive Liquids

- Pickling solutions have a low pH and are therefore acidic and capable of causing burns to skin and eyes upon contact.
- Acids, such as nitric acid and hydrochloric acid, have a low pH and are therefore acidic and capable of causing burns to skin and eyes upon contact.
- Bases, such as sodium hydroxide, have a high pH and are therefore basic/alkaline and capable of causing burns to skin and eyes upon contact.

3.1.4. Oxidizing Agents

- Oxidizing agents are chemicals that give off oxygen or other oxidizing substances like chlorine or fluorine. They are not necessarily combustible, but they can intensify combustion and increase the flammable range for chemicals, so they ignite more readily.
- Oxidizing solids – Examples include crystalline substances like ammonium dichromate, which may be used in printmaking, or ammonium nitrate and potassium dichromate, which are used in patina processes.

- Oxidizing liquids – Examples include concentrated nitric acid (≥69.5%) and hydrogen peroxide (≥30%). Of these two substances, nitric acid may be used in printmaking, and both may be used in patina processes.
- Oxidizing gases – Examples include oxygen, chlorine, and fluorine. Oxygen is used as a compressed gas in metal and wood shops.

3.1.5. Toxic Chemicals

- Toxic Solids – Examples include heavy metals such as barium, cadmium, chromium, lead, and selenium, which may be found in certain paints and glazes. Silver is a heavy metal that may be used in film development and the Small Metals studio, and though not very toxic to humans, is severely harmful to aquatic life. Toxic organic solids include p-Phenylenediamine, which is found in color developers.
- Toxic liquids – Examples include solutions of toxic solids, organic solvents, and halogenated solvents. Paint products such as lacquers and thinners contain benzene, toluene, and dichloromethane, while adhesives, varnishes, and shellacs often contain methanol.
- Toxic gases – VOCs are emitted as gases from solvents used in paint products. Toxic fumes are present in trace amounts when working with liquid epoxies and may take 1 to 3 days to dissipate. When heat is applied to any such substance that releases toxic fumes, the inhalation hazard is exacerbated. A prime example of this is the production of welding fumes consisting of carbon monoxide and metallic oxides of the metal being welded; and the production of gases such as carbon monoxide, formaldehyde and sulfur dioxide during the firing of clay materials in kilns.

3.2. Equipment Hazards

3.2.1. Small Metals Studio

- **Metalworking tools –** Various tools such as drills, grinders, polishers, and soldering equipment are commonly used in the Small Metals studio. Improper use or lack of safety precautions with these tools can result in cuts, abrasions, burns, or electrical shock. It is important to use tools correctly and follow the studio-specific SOP and safety guidelines provided by manufacturers.
- **Heat sources –** The Small Metals studio includes the use of acetylene torches, crucibles, and ovens/kilns for heating and shaping metals. These heat sources can cause burns or fires if mishandled or left unattended. It is crucial to use appropriate protective gear, maintain a fire-safe work area, and have fire extinguishing equipment readily available.
- **Metalworking machinery –** The Small Metals studio may have machinery like metal shears, rolling mills, and power presses. Mishandling or improper operation of these machines can result in crushing injuries, entanglement hazards, or getting caught in moving parts. Adequate training, proper guarding, and following safety procedures are important to prevent accidents.
- **Sharp tools and edges** – Hand tools like saws, files, hammers, or shears used for metalworking can have sharp edges or points. Careless handling or incorrect use can lead to cuts, punctures,

or other injuries. Using appropriate protective gear and employing safe work practices can minimize these hazards.

- **Fumes and ventilation** – Certain metalworking processes, such as soldering, welding, or metal plating, can generate fumes or vapors that may be hazardous when inhaled. The Small Metals studio is equipped with vents that remove airborne contaminants while using torches.

3.2.2. Ceramics Studio

- **Kilns –** Hazards associated with kilns include the risk of burns from hot surfaces, exposure to high heat, and the potential for fire if kilns are not operated or maintained properly. It is crucial to follow manufacturer guidelines, use appropriate protective gear, and ensure proper ventilation and fire safety measures.
- **Pottery wheels –** Hazards related to pottery wheels include entanglement of hair, clothing, or jewelry in rotating parts, as well as the risk of getting fingers or hands caught between moving components. It is important to use pottery wheels with appropriate safety guards and to follow safe work practices, such as securing long hair and wearing appropriate clothing.
- **Clay mixing equipment –** Hazards associated with clay mixers and pug mills include entanglement hazards, pinch points, and the risk of injuries from rotating blades and augers. It is important to use these machines with proper safety guards, follow manufacturer guidelines, and ensure that the equipment is properly maintained.
- **Cutting and shaping tools** – Various cutting and shaping tools like knives, wire tools, and carving tools are used in the Ceramics studios. These tools can pose risks of cuts, punctures, or lacerations if mishandled or used improperly. Proper training and safe work practices, such as using tools with sharp blades or points safely and storing them securely, are important to prevent accidents.
- **Kiln furniture and shelves –** Hazards associated with kiln furniture include the risk of heavy items falling, causing injuries or damage. It is important to use proper lifting techniques, secure kiln furniture properly, and maintain a well-organized kiln area to prevent accidents.

3.2.3. Print Shop

- **Lithography Press** – Lithographic presses used for printmaking can be large and complex machines. Hazards associated with lithography presses include the risk of entanglement in moving parts, crush injuries, and pinch points. Operators should receive proper training on safe operation, follow safety protocols, and use machine guards to prevent accidents.
- **Lithographic Plates –** Handling lithographic plates, which are typically made of metal or stone, can present hazards such as sharp edges or heavy weight. Care should be taken when moving or cleaning plates to avoid cuts, pinching, or strain injuries. Using protective gloves and following safe handling practices are important.
- **Press Blankets and Rollers –** Lithographic presses utilize press blankets and rollers for transferring ink to the printing surface. These components can be heavy and have pinch points

that can cause injuries during installation or maintenance. Proper training, use of lifting aids, and following safety procedures can reduce the risk of accidents.

3.2.4. Photography Studio

- **Darkroom Equipment –** Darkrooms typically contain equipment such as enlargers, film processors, safelights, and timers. Hazards associated with darkroom equipment include electrical shocks, burns from hot surfaces, or injuries from moving parts. Regular maintenance, proper grounding, and adherence to safety procedures are important to prevent accidents.
- **Photochemical Mixing and Handling –** Mixing and diluting photochemicals require careful handling to avoid spills or accidental mixing of incompatible chemicals. Chemicals should be stored and labeled properly, and operators should follow specific instructions provided by the manufacturer.
- **Film Processing Equipment –** Film processing machines, including tanks, reels, and film dryers, are used in the Photography studio. Hazards associated with these machines include pinch points, entanglement risks, and exposure to chemicals. Operators should receive proper training, use appropriate PPE (Personal Protective Equipment), and follow safety protocols to prevent accidents.
- **Heat Sources –** Hazards associated heat sources such as film dryers or mounting presses include burns, fire risks, or damage to equipment. Operators should exercise caution, use appropriate protective equipment, and follow manufacturer guidelines to prevent accidents.

3.2.5. Sculpture Studios

- **Power tools –** Power tools such as electric saws, drills, and grinders can cause injuries if not used properly. The risk of cuts, abrasions, or getting caught in moving parts is present. Incorrect handling or lack of safety precautions can lead to accidents.
- **Welding equipment –** Exposure to intense heat, sparks, and ultraviolet radiation can pose a risk of burns, eye injuries, and inhalation of harmful fumes. Proper protective gear, such as welding helmets, gloves, and ventilation systems, should be used.
- **Sculpting tools –** Various hand tools like chisels, knives, and rasps are commonly used in sculpture. These sharp tools can cause cuts or punctures if mishandled or used improperly. Adequate training and caution are essential to minimize the risk of accidents.

3.3. Other Physical Hazards

- **Noise –** Power tools and heavy machinery such as pug mills, clay mixers, powered saws, and grinders generate high levels of noise. Hearing protection must be provided to individuals working in areas with noise levels that exceed 85 decibels, and efforts should be made to reduce noise using quieter tools or sound insulation measures.
- **Respiratory Hazards–** Fine dust and airborne particles may be generated when scraping or cutting stone, clay, ceramic materials, or wood. Prolonged exposure to these airborne particles can lead to respiratory problems. Using appropriate respiratory protection, maintaining good

ventilation, and practicing good housekeeping by cleaning up dust regularly can help mitigate these hazards.

- **Eye hazards –** Art studios, and particularly shops, include processes that often generate sparks, flying metal fragments, or particles that can cause eye injuries. Safety glasses or goggles should be worn to protect against these hazards. Additionally, studios that involve welding or lasers require special eye Personal Protective Equipment (PPE) such as welding helmets or laser safety glasses to protect the user from blinding lights.

- **Electricity –** Art studios typically have multiple electrical devices and wiring. Faulty equipment or exposed wires can lead to electric shocks or fire hazards. Regular inspection of electrical systems and adherence to safety protocols, such as grounding and using circuit breakers, can reduce the risk of electrical accidents.

- **Ergonomics and manual handling –** Various art studio tasks may involve lifting heavy materials, repetitive motions, or awkward postures. Improper ergonomics and manual handling techniques can lead to strains, sprains, or musculoskeletal injuries. Providing proper training, using mechanical lifting aids when necessary, and promoting ergonomic workstations can help reduce these risks.

- **Fall and Trip Hazards –** Aisles and walkways within art studios should be unobstructed and free of clutter (equipment, supplies, etc.) to minimize tripping hazards and any materials on the floor should only be present if currently in use and under supervision. When working 4 feet or higher above a lower level, such as when installing an art project, fall protection, such as railing or a personal fall arrest system, is required.

4. HAZARD CONTROL

Each art studio has its own unique hazards and hazard controls that may not be listed here and must be addressed in studio-specific SOPs and trainings.

The hazard control examples listed below are in the order in which they should be implemented to reduce exposure to hazardous materials and/or processes. PPE is used as a last resort and offers the least amount of protection, and must be used in conjunction with other hazard control methods.

4.1. Examples of Hazard Elimination, Substitution, Controls, and PPE

4.1.1. Small Metals Studio:

- **Hazard:** Metal dust or fumes generated during grinding, soldering, or welding.
    - **Elimination or substitution** may not be applicable without limiting the options for metal media and thus is not the most feasible.
    - **Engineering Controls:** Use of local exhaust ventilation and soldering vents to capture and remove airborne contaminants.

- **Administrative Controls:** Training studio personnel in safe operation and maintenance of equipment, chemicals, and work area.
- **PPE:** Use of safety glasses.

- **Hazard:** Cuts or injuries from sharp tools or machinery.
  - **Elimination** of tools and machinery is not feasible.
  - **Substitution** of hand tools like shears, hand saws, and metal files for powered tools may decrease the odds of lacerations if safeguards are in place. More durable cutting discs (with diamond or carbide-tipped discs) may be used in place of less-durable discs. Machinery may be upgraded for safety reasons if deemed necessary.
  - **Engineering Controls**: Proper machine guarding and safety shields.
  - **Administrative Controls:** Provide training in safe tool handling and safe operation of machinery. Regular maintenance to ensure equipment is in good working condition.
  - **PPE:** Kevlar-reinforced and leather gloves provide some protection against saws and other sharp tools.

4.1.2. Ceramics Studio

- **Hazard:** Inhalation of fumes and dust particles generated during clay mixing, pottery wheel use, clay work, or kiln firing.
  - **Elimination and substitution** of these hazards may not be applicable or may limit the options for ceramic media and thus is not the most ideal. However, a less hazardous glaze may be substituted for a more hazardous glaze if a near-identical result may be reached.
  - **Engineering Controls:** Use of wet methods or local exhaust ventilation to control dust.
  - **Administrative Controls:** Train personnel on how to safely operate machinery, ensure proper clay hydration before firing in kiln, sand clay (in a well-ventilated area with a respirator), or clean up clay dust (mop, don't sweep).
  - **PPE:** Use of N95, elastomeric respirators, or dust masks is voluntary. Voluntary use of a respiratory requires submittal of a Voluntary Use form, found here https://ehs.unm.edu/assets/documents/voluntary-n95-use-r1-fillable.pdf

- **Hazard:** Burns from kilns or hot surfaces.
  - **Elimination and substitution** are not applicable.
  - **Engineering Controls:** Protective barriers and insulation to prevent accidental contact.
  - **Administrative Controls:** Clear labelling and signage for hot surfaces. Proper training on kiln operation and maintenance. Loading and unloading of kiln limited to studio manager and/or trained teaching assistant.

- **PPE:** Wear raku firing clothing or flame-retardant clothing when firing a kiln. Always use oven mitts when opening the kiln and handling hot ceramic materials. Even when materials have cooled, glazes may shatter upon firing and may be sharp enough to cut skin.

4.1.3. Lithography/Print Shop

- **Hazard:** Chemical exposure from lithographic processes.
  - **Elimination or substitution** of hazardous chemicals with less hazardous alternatives.
  - **Engineering controls:** Use of ventilation systems to prevent exposure to fumes.
  - **Administrative Controls:** Training personnel on safe handling and storage of chemicals.
- **Hazards:** Lithography stones, pinch points, and moving parts on lithographic presses.
  - **Elimination or substitution** may not be applicable without limiting the options for printmaking media and thus are not the most ideal hazard controls.
  - **Engineering Controls:** Installation of safety guards or barriers. Regular maintenance and inspection to ensure proper functioning.
  - **Administrative Controls:** Training shop personnel in safe operation and maintenance of presses and hydraulic dollies. Moving of lithography stones should be limited to studio manager and/or trained teaching assistant.
  - **PPE:** Wearing steel/composite-toe boots when moving lithography stones.

4.1.4. Photography Studio

- **Hazard:** Chemical exposure from handling and processing photo chemicals.
  - **Substitution** of less hazardous chemicals or processes.
  - **Engineering Controls:** Use of fume hoods and ventilation systems to prevent exposure to fumes.
  - **Administrative Controls:** Proper storage and handling procedures.
  - **PPE:** Use of gloves, safety glasses, and aprons.
- **Hazard:** Fire hazards from electrical equipment or flammable materials.
  - **Elimination or substitution** may or may not be applicable without limiting the options for film media and thus are not always the most ideal hazard controls.
  - **Engineering controls:** Fire detection and suppression systems.
  - **Administrative controls:** Regular inspection and maintenance of electrical equipment. Training on proper grounding and electrical safety measures. Adequate storage and handling of flammable materials.

4.1.5. Sculpture Studios

- **Hazard:** Inhalation of dust or fumes from woodworking or metalworking processes.
    - **Elimination and substitution** of these hazards may not be applicable or may limit the options for ceramic media and thus is not the most ideal.
    - **Engineering controls:** Use of local exhaust ventilation and/or dust collection system to remove contaminants and prevent exposure.
    - **Administrative controls:** Training on safe machine operation, housekeeping, warning signs, and limited occupancy and access to certain machines. Use of wet method for cleaning horizontal surfaces.
    - **PPE:** Use of respiratory protection such as an N95 mask is voluntary. Voluntary use of a respiratory requires submittal of a Voluntary Use form, found here https://ehs.unm.edu/assets/documents/voluntary-n95-use-r1-fillable.pdf
- **Hazard:** Injury from power tools or heavy machinery.
    - **Elimination and substitution** of outdated tools and machinery may include upgrading to a safer and more effective tool or machine.
    - **Engineering controls:** Use of machine guarding and safety interlocks.
    - **Administrative controls:** Training on safe tool use and handling. Use of personal protective equipment. Regular maintenance and inspection of equipment.

5. SOPs & Training

Each art studio has its own unique hazards and hazard controls that must be addressed in studio-specific SOPs and trainings. Studio managers should develop SOPs that include the hazards and hazard controls specific to their type of studio. Studio users, including students, must be trained on the studio hazards and how to protect themselves from the hazards. This can be accomplished by having users read and sign SOPs, and by providing demonstrations on the proper use of materials, tools and equipment. EHS can assist with SOP development and review. Example SOPs, which can be used as templates, are included as Attachments 1 and 2.

6. Emergency Preparedness

To ensure a safe studio environment, the art studio safety program places significant importance on emergency preparedness. Each studio must have:

- Emergency contact information posted in a prominent location
- First aid kit
- Spill kit (if chemicals are present)

Studio personnel must be aware of the locations of emergency equipment such as fire extinguishers, fire alarm pulls, safety showers, and eyewash stations and be familiar with the contents of their departments Area Emergency Plan (AEP).

7. Annual Inspections

All art studios will be inspected annually by EHS. Inspectors will assess the studio's compliance with this program and will provide guidance in the event that safety issues are identified. The inspections will be scheduled with the studio manager at least one week in advance.

8. Incident Reporting and Investigation

Despite our best efforts to be careful and safe, incidents and near-misses occur. In order to improve the safety of our workplace, it is imperative that incidents and near-misses be reported to EHS. Reporting is also a vital step in the process of fulfilling a Worker's Compensation claim, if necessary.

Incidents and near-misses must be immediately reported to the studio manager or supervisor and to EHS when safe to do so. Priority must always be the safety and health of those impacted by an incident. To report an accident, incident, spill or near-miss to EHS, fill out the form located here:

https://ehs.unm.edu/accident-incident-spill-reporting/index.html

9. Waste Disposal

Waste materials and chemicals generated in art studios must be collected, labeled, stored and disposed of properly. Studio personnel are responsible for identifying, labeling, properly storing and coordinating the disposal of all wastes generated in their studio. The following are guidelines on proper waste management in the art studios at UNM:

In general, studio personnel must:

I. **Segregate** waste from non-waste by having a designated waste accumulation area. This area should be close to the point of generation and never in a different room.

II. **Label** waste containers with these three elements:

1. The words "Hazardous Waste" or "Non-Hazardous Waste"
2. A list of all constituents in the container (including water). Waste in its original container is exempt from this step. For waste *not in its original container*, fill out a Waste Determination Form and email it to chemsafety-l@list.unm.edu

3. Hazard identifiers (these can be words, pictograms, checkboxes, or other means of hazard identification whether printed, written, or drawn legibly); hazards include flammable, corrosive, reactive and/or toxic.

III. **Properly dispose** of hazardous waste by emailing a waste pickup request form to EHS at: chemsafety-l@list.unm.edu. EHS will promptly pick up your waste on the Wednesday after receiving the pickup request form.

In particular, follow the studio-specific disposal considerations listed below:

9.1. Small Metals Studio

Corrosives: Collect spent pickling solution in a container with a screw-top lid. Label the container as "Hazardous Waste, Spent Pickling Solution, Corrosive" and store in a spill tray.

Heavy Metals: Any waste contaminated with heavy metals, such as lead, cadmium, mercury, or silver must be handled as hazardous waste and labeled as toxic.

9.2. Lithography/Print Shop

Inks: Ensure proper labeling and sealing of ink containers to prevent spills and leaks. Dispose of empty ink containers via EHS.

Lithographic Chemical Waste: Collect and store lithographic chemicals, such as solvents, developer solutions, and etchants, in designated waste containers. Never store hydrogen peroxide or nitric acid near flammables or corrosives. If nitric acid is to be stored in the vicinity of other corrosives, do so in its own spill tray.

Solvent-Soaked Rags/Cleanup Materials: Collect used rags, wipes, paper towels, gloves and other solid materials contaminated with solvents in flammable cans lined with plastic bags. Label the can as "Hazardous Waste, Rags contaminated with solvents, Flammable, Toxic". It is advisable to wet down linseed oil-saturated rags, as they are capable of spontaneous combustion.

9.3. Photography Studio

Film Processing Waste: Collect film processing waste in a sealable container and label as "Hazardous Waste, used photographic film processing solution, contains silver, Toxic" and dispose of through EHS.

Silver Recovery (optional): Implement a silver recovery system to capture and recycle silver from spent fixer solutions or consider contracting with a licensed silver recovery service provider.

9.4. Painting & Drawing Studio

Solvent Waste: Collect used solvents, thinners, and cleaning solutions in tightly sealed containers labeled as "Hazardous Waste, Used Solvent (include names of solvents), Flammable & Toxic" and dispose of through EHS.

Solvent & Paint Soaked Rags/Cleanup Materials: Collect used rags, wipes, paper towels, gloves and other solid materials contaminated with solvents in flammable cans lined with plastic bags. Label the can as "Hazardous Waste, Rags contaminated with solvents, Flammable, Toxic". It is advisable to wet down

linseed oil-saturated rags, as they are capable of spontaneous combustion. If the paint on the rags contains heavy metals (such as barium and cadmium), include this information on the waste label.

Pigments and Mediums: Dispose of empty containers of pigments, mediums, or other art materials as regular waste, following local recycling guidelines if applicable.

Brush Cleaning (optional): Minimize the use of solvents for brush cleaning. Consider using non-toxic alternatives or designated brush cleaning stations equipped with appropriate filtration systems.

End of Document

ATTACHMENT 1

SOP Template for Equipment – Table Format

Standard Operating Procedures (SOP) for Using a Hot Wire Cutter in the (Studio Name) (Bldg #, Room #)

1. Process (if applicable)	Cutting polystyrene and expanded polystyrene with a hot wire cutter
2. Chemical(s)	Polystyrene foam and expanded polystyrene foam (SDSs attached)
3. Hazards	Polystyrene and expanded polystyrene foams are slightly flammable; vapors from cutting process may cause respiratory distress and eye irritation
3. Engineering & Administrative Controls	• Users must check out hot wire cutter from the Fab Lab staff and be briefed on hot wire cutter safety before using the tool • Users must read this SOP and sign/date the signature page • Hot wire cutters must ONLY BE USED in outdoor work areas
4. Personal Protective Equipment (PPE)	• Eye protection (safety glasses) • Skin protection (gloves) and long sleeves • Respiratory protection (N95) is voluntary – if used, user must watch 10-minute video and sign an acknowledgement form. Video and form are located here: Voluntary N95 Use
5. Special Handling Procedures & Storage Requirements	For hot wire cutter: Allow wire cutter to cool before storing. Keep wire cutter away from flammable materials. For polystyrene foams: Avoid contact with skin and eyes and do not breath dust or fumes (wear PPE). Cut only in outdoor work area.
6. Spill & Accident Procedures	Spills unlikely – material is solid. For accidental exposure to vapors, get to fresh air; go to EOHS or SHAC if experiencing symptoms
7. Waste Disposal	Submit Chemical Waste Pickup request form to chemsafety-L@list.unm.edu; form located here: https://ehs.unm.edu/waste-management/index.html
8. Special Precautions for Animal Use (if applicable)	Not applicable

Particularly Hazardous Substance involved?	__ YES	Parts 9, 10 & 11 are mandatory
	__ NO	Parts 9, 10 & 11 are optional

9. Approval Required	Users must receive specific physical and health hazard information and safe laboratory work practices training from their supervisor prior to using the hot wire cutter.
10. Decontamination	Not applicable
11. Designated Area	

*Name:	Title:
Signature:	Date:

**to be filled in by Art Studio Manager or Supervisor*

I have read and understand the content of this SOP:

Name	Signature	Date

ATTACHMENT 2

SOP Template for Using Art Studio Solvents

Standard Operating Procedure for Using Art Studio Solvents* in the UNM Art (Painting) Studio (Bldg#, Room#)

Applies to solvents such as turpentine, lithotine, paint thinner, acetone, and other solvents typically used in an art studio

Print a copy and keep with your lab's training documents.

Department	
Principal Investigator (PI)	
PI Phone #	
Secondary Contact	
Secondary Contact Phone #	
Emergency/24-Hour Contact	
Emergency Contact Phone #	

1. Purpose

The purpose of this document is to provide the information necessary to safely use flammable solvents such as turpentine, lithotine, paint thinner, acetone and other solvents typically used in the Studio Manager's Name Art Studio, and to comply with requirements of OSHA Standard 29 CFR 1910 Subpart Z.

2. Hazard Identification

- ***Flammable*** -- Solvents such as turpentine and other art studio solvents are extremely flammable and should only be used in areas with adequate ventilation to prevent buildup of vapors. Keep away from heat, sparks, flames and all other sources of ignition. Vapors may cause a flash fire.

- ***Health Hazard/Toxic*** – Paint thinner contains ingredients that are toxic and may be fatal or cause blindness if ingested. Inhalation of paint thinner vapors may cause dizziness, headache, irritation of eyes and respiratory tract, fatigue, cough, diarrhea, vomiting. Contact with skin may cause irritation, numbness in fingers and arms, drying of skin and dermatitis. Contact with eyes may cause irritation, burns, conjunctivitis and corneal ulcerations. Chronic/repeated prolonged exposure may cause neurological or other physiological damage.

3. Training Requirements

All UNM personnel who use solvents must be trained before using them. Training must include:

- This SOP (read and sign)

4. Engineering & Administrative Controls

Art studio solvents must be handled/used within a chemical fume hood, which is designed to pull air and fumes up and away from the user (Engineering Control). If a chemical fume hood is not available, a snorkel or other point-source ventilation is sufficient. If a snorkel is not available, use of solvents must only occur in a well-ventilated area.

All lab personnel who use art studio solvents must be trained on the hazards of acids, including being familiar with this SOP (Administrative Control).

5. Personal Protective Equipment (PPE)

- *Hand Protection*: Nitrile gloves are adequate protection from solvents and should be worn when mixing or pouring.

- *Eye Protection*: Safety glasses or splash goggles must be worn when mixing or pouring large quantities (>1 gallon) of art studio solvents.

- *Respiratory Protection*: Art studio solvents must be used in a well-ventilated area.

6. Standard Operating Procedures for Using Solvents in the UNM Painting Studio:

a. Put on proper PPE if mixing or pouring (eye protection, gloves)
b. Remove solvent container from storage location and place in fume hood or other well-ventilated area.
c. Continue listing the steps for the procedure in which solvents are used in the studio (i.e. how to mix, quantity used, etc.) Include instructions to label containers with name and hazards of solvent (i.e. “Paint thinner, Flammable)
d. Place the container back in its storage location.

After removing gloves, wash hands thoroughly.

7. Spill Procedures:

For small/minor spills (<1L), use the materials in the spill kit to clean up the spill. Minimum PPE for cleaning up a spill of solvents is safety glasses/goggles, gloves and lab coat or apron. The spill clean-up materials must be double-bagged, tightly closed, labeled and picked up by EH&S for disposal.

Spills in excess of 1L of solvents should not be cleaned up unless trained to do so. In the event of a large/major spill of solvent, evacuate the area and call:

- 911 and
- Environmental Health & Safety (EH&S) – 505-277-2753 during business hours, or
- EH&S Duty Officer Pager -- 505-951-0194 (enter your phone number after the message)

8. First Aid Procedures

In the event of an overexposure to solvents:

- Rinse affected area (skin and/or eyes) with water for 15 minutes.
- If inhaled, move victim to well-ventilated area or move outdoors.
- If the exposure is severe, seek medical attention at the emergency room.
    - If heading to UNMH, a non-injured person should contact the UNMH charge nurse in advance at 505-604-9349 with information on the chemical and nature of exposure.
- UNM employees should contact Employee Occupational Health Services (EOHS) at 505-272-8034.
- UNM students should contact Student Health Services at 505-277-7810.
- If the exposure occurs after hours, employees and students should seek medical treatment at a hospital emergency room.
- The supervisor of the injured person and EHS must be notified as soon as possible after the exposure.
- The notice of Accident, Incident, or Spill form should be filled out on the EHS website.

9. Other Emergencies

Fire or Medical Emergency -- Dial 911

Life-Threatening Emergency, After Hours, Weekends and Holidays – **Dial 911**

Non-Life-Threatening Emergency – Call EHS at 505-277-2753 to seek assistance and report the incident.

10. Disposal Procedures

Waste solvents should be collected in suitable containers and properly labeled as soon as waste is added to the containers. Solvent waste should be labeled as such:

HAZARDOUS WASTE
Used/Waste Solvents (be specific)
Flammable & Toxic

To request a pickup, fill out a Chemical Waste Pickup Request form and email the form to chemsafety-L@list.unm.edu. The form can be found on the EHS website: https://ehs.unm.edu/waste-management/index.html

Principal Investigator/Lab Manager SOP Approval

By signing and dating here, the Studio Manager certifies that this Standard Operating Procedure (SOP) for Using Art Studio Solvents is accurate and provides information sufficient to safely use flammable solvents in the art studios at UNM.

_____

Signature Printed Name/Title Date

I have read and understand the content of this SOP:

Name	Signature	Date

Attachment 3

List of UNM Art Studio Spaces

Art Studios at UNM

Building Name	Building #	Room Number	Type of Studio
Art Building	84	108	Photography
		118 Suite	Small Metals
		127 Suite	Sculpture
		142, 144, 146, 148 Suites	Lithography/Print Shop
		150, 151, 152 Suites	Ceramics
		249	Painting & Drawing
Art Annex	105	Basement, 1st Floor	Photography, Lithography, Painting & Drawing
Masley Hall	68	110	Pottery
		118	Violin Making Shop
Mattox Sculpture Center	123	1st, 2nd, 3rd Floors	Sculpture, Fabrication
Student Union Building	60	1098	Ceramics, Jewelry Making
Tamarind Institute	162	Lower Level, 1st Floor	Lithography
Continuing Education	258	110	Drawing
	259	F/108	Painting, Drawing, Sculpture
UNM Gallup, Gurley Hall	2	1236	Jewelry Making
		1238	Ceramics
		1239	Art
UNM Taos, Fred Peralta Hall		205	Woodshop
		211	Small Metals
		214	Ceramics
		221	Painting
		229	Lithography/Print Shop
UNM Valencia	C	106	Painting & Drawing
	C	149	Photography
	C	150	Ceramics
UNM Los Alamos	5	517	Drawing, Painting, Dry Sculpture

Art Studio Safety Program

Final Audit Report 2023-08-22

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