Laboratory Safety Plan (LSP)
STUDENTS
IN THE CASE OF AN EMERGENCY:

- If you are in immediate danger such as a fire, or large chemical spill, pull the fire alarm, evacuate the area and building, and call Security at Extension 5911, or from a mobile phone at 859-5911, from a safe location. Locate the members of your lab personnel outside at a prearranged meeting space.
- Notify your instructor or supervisor if not in immediate danger. Phone numbers for people responsible for the room are listed on the door labels outside of each lab. DO NOT LEAVE THE AREA UNTIL HELP ARRIVES.
- Never attempt to handle an emergency or a spill by yourself. Always find a partner and notify Security at extension 5911 or 859-5911 from a mobile phone.
- DO NOT attempt to handle any emergency situations that make you feel uncomfortable. Please evacuate the area and call for immediate assistance (use information on door signs).
- THE COLBY EMERGENCY CAMPUS SIREN: If you hear the alarm siren atop the Mudd building sound, listen for and follow any verbal instructions given at the end of the tone. If you cannot clearly understand the instructions, go to the Colby College homepage (www.colby.edu) and follow the instructions given there.
- When the Health Center (HC) is open, all students with minor/moderate injuries should go to the HC for evaluations. The HC is open 8-8 Monday-Friday and 12-8 Saturday-Sunday.
- Off hours or for more serious injuries should go to the ER for evaluation either transported by Security or if need be City ambulance.
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LSP, Colby College
5500 Mayflower Hill, Waterville ME 04901
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1.0 PURPOSE
1.1 The Laboratory/Studio Safety Plan (LSP) has been drafted as a general guidance document listing the universal safety requirements to work in any Colby science laboratories. This plan does not replace or modify the existing laboratory specific Chemical Hygiene Plans. The LSP complies with the requirements of OSHA’s Laboratory Safety Standard, 29 CFR 1910.1450.

2.0 SCOPE
2.1 The requirements of the LSP apply to all faculty, staff, students, and student employees that work in the laboratory facilities at Colby College. The primary Colby Divisions that fall under the scope of this plan include; Natural Sciences Division, Interdisciplinary Studies Division (Environmental Studies Program) and the Social Sciences Division.

3.0 REFERENCE DOCUMENTS
3.2 OSHA, Occupational Exposure to Hazardous Chemicals in Laboratories, 29 CFR 1910.1450
3.3 Chemistry Department Laboratory Safety Plan (DLSP)
3.4 Biology/Environmental Studies DLSP
3.5 Geology DLSP
3.6 Physics DLSP

4.0 DEFINITIONS
4.1 Cryogenic liquids: Materials with boiling points of less than -73C (-100F). This includes liquid nitrogen, helium, oxygen, hydrogen and argon. A slush mixture of dry ice with isopropanol is a common cryogen used at Colby College.
4.2 DLSP: Department Laboratory Safety Plan
4.3 Ethidium Bromide (EtBr): A commonly used stain for the visualization of nucleic acids in agarose gels. It is a mutagen. It is widely used by scientists due to its high sensitivity, rapid staining and low cost.
4.4 Hydrofluoric Acid (HF): A colorless liquid with a strong irritating odor at low concentrations (3 ppm). Employees and students who handle HF must receive documented training on the hazards of HF and what to do in the event of an exposure or a spill. The MSDS/SDS and a calcium gluconate antidote and the instruction for use must always be kept in the immediate area where HF is used.
4.5 Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS): Chemical and hazardous material information sheets specifying chemical hazards in compliance with the OSHA Hazardous Communications Standard.
4.6 Personal Protective Equipment (PPE): Protective clothing or gear used by individuals to protect laboratory and studio personal from various physical, chemical and other hazards.
4.7 **Physical Plant Department (PPD):** Colby College’s facility maintenance department.

4.8 **Satellite Accumulation Area (SAA):** Accumulation areas for specific hazardous waste streams.

### 5.0 RESPONSIBILITIES

*Respnsibilities for oversight, implementation and maintenance of the LSP are assigned below. Identified personnel may designate tasks assigned to them to a qualified employee, student or consultant, as appropriate.*

#### 5.1 Dean of Faculty:
- The Dean of Faculty offices will oversee, support and enforce the terms of the LSP and Department specific DLSPs,
- Meet with the faculty members to discuss and correct the cited violations included in biennial and other inspection reports,
- The administration will maintain representation on the Lab Safety Committee,
- The administration will provide budgetary support to ensure health and safety campus wide,
- Receive, review and reply to reports submitted by the CHO on the status of the program.

#### 5.2 Chemical Hygiene Officer (CHO):
*The EHS Director will oversee the plan and act as the CHO. Responsibilities of the CHO include the following:*
- The CHO will maintain and revise the LSP annually,
- Review, create, and revise safety rules and regulations based on risk assessments, incidents and near misses,
- Serve on the Lab Safety Committee,
- Oversee the chemical product and hazardous waste storage areas,
- Conduct biennial inspections of laboratories and studios and submit the results to the administration,
- Maintain records including inspection forms, training logs, spill reports, accident reports, and inventory records,
- Meet with the faculty members to discuss and provide guidance to correct the cited violations included in biennial and other inspection reports.

#### 5.3 Departmental Chairperson:
*The department chairperson will assume overall responsibility for maintaining the Department specific DLSP. Additional responsibilities of the department chairperson include the following:*
- Support the CHO in the implementation of the LSP,
- Verify that all PIs in the Department are familiar with the contents of the LSP and department specific DLSPs,
- Provide budgetary support to ensure compliance including adequate personal protective equipment and third party training if required,
- Serve on the Lab Safety Committee and appoints a Departmental Safety Coordinator.
5.4 **Lab Safety Committee (LSC):**

*Members of the LSC will meet at least quarterly. LSC will include the Department Chairperson and/or Department Safety Coordinator, the CHO and a representative from the Dean of Faculty. Responsibilities of the LSC include:*

- Review spill, accident and inspection reports,
- Discuss campus wide laboratory safety issues and make recommendations to the CHO for revisions of the LSP/DLSP and to departmental chairs to resolve any issues that result in noncompliance.

5.5 **Principal Investigator (PI)/ Laboratory Supervisor:**

- The PIs/staff member will support the CHO and departmental chairs in the implementation of the LSP and department specific DLSPs,
- Maintain a positive attitude towards safety requirements and set a good example to lab personnel by following safety rules and wearing proper personal protective equipment,
- Ensure that all personnel are safety trained and authorized before they work in the laboratory,
- Ensure that all personnel comply with the LSP and DLSP requirements at all times,
- Provide appropriate personal protective equipment compatible with the hazards specific to the laboratory,
- Review and understand safety procedures specific to their laboratory,
- Assume responsibility for laboratory visitors,
- Properly characterize and manage all waste generated in their labs,
- Complete Spill and Accident Report Forms for incidents in their labs,
- Contact appropriate personnel to report problems with laboratory facilities and will work directly with the Departmental Chairperson and/or the Departmental Safety Coordinator to ensure laboratory compliance. Students shall not be used to communicate EHS issues between faculty and staff.

5.6 **Departmental Safety Coordinator:**

*The Departmental Safety Coordinator will act as a liaison between the department(s) and the Safety Committee. Responsibilities include:*

- Work with the departmental chairperson to ensure LSP compliance,
- Serve on the Lab Safety Committee.

5.7 **Laboratory Personnel (includes faculty, staff and students):**

- All laboratory personnel will read, understand and follow all safety rules and regulations that apply to the workplace,
- Complete safety training by the CHO or the Departmental Safety Coordinator and sign a safety agreement that assures that they understand and agree to follow the LSP and Department specific DLSPs,
- Comply with specific behavior outlined in the LSP including the wearing of the appropriate personal protective equipment at all times, good housekeeping practices, proper laboratory conduct and the immediate communication of any spills, illnesses, and accidents.
5.8 **PPD Services Personnel:**
- All PPD members who work or may work in any laboratory or studio will be trained by the CHO on LSP awareness and will obtain information about the workplace before any work is started.
- All PPD personnel will refuse to enter or render services to any laboratory in an unsafe condition and will report findings to their immediate supervisor.

6.0 **LAB SAFETY REQUIREMENTS**
*The following includes basic guidelines for maintaining a safe working environment in all laboratories at Colby College.*

6.1 **General Lab Safety Requirements:**

6.1.1 Students are not permitted to work alone in Colby labs while using hazardous materials or performing hazardous procedures. Select Departments may allow trained students to work alone conducting hazardous work in the labs provided the students comply with the risk minimization procedures and requirements listed in the Department Specific DLSP.

6.1.2 If a student wishes to study and/or work in a laboratory where no hazardous substance or procedure is involved, the student may do so at any hour of the day without a partner, but the student must abide by the general safety rules outlined in this plan and their Department or Program specific DLSP.

6.1.3 Personnel are not permitted to play loud music or wear headphones/earbuds while working while working with hazardous materials or process in the laboratory.

6.1.4 No pets are permitted in the laboratory.

6.1.5 Visitors are permitted in the laboratory as long as they are wearing the correct PPE and escorted by trained authorized personnel. Visitors must be trained and sign the Lab Safety Training Acknowledgement before they will be allowed to work in the laboratory or studio.

6.1.6 Minors, not enrolled at Colby, are permitted in the laboratory only when involved in educational or classroom activities. Minors in Colby's labs must be supervised in person at all times, wear applicable PPE and comply with all lab safety requirements. The departmental chairperson must approve all events involving minors.

6.1.7 Use extreme caution when conducting a new experiments or procedures. Never perform experiments that have not been authorized by the faculty in charge of the lab.

6.1.8 You must be trained by a faculty member before working with a new chemical, procedure, or equipment. If you are not comfortable, ask a faculty member for additional guidance.

6.1.9 Follow the standard operating procedures at all times. Discuss any potential changes with a faculty member before you modify or change an experiment or procedure.

6.1.10 Carefully inspect all equipment and instrumentation before use.
6.1.11 Know the location of all the safety equipment and spill kit in your workspace and how to use it properly.

6.2 Requirements for Personal Protective Equipment:

6.2.1 Appropriate eye protection (goggles or safety glasses) must be worn whenever working with a hazardous substance or procedure. Examples of hazardous substances include solvents, corrosives, or toxic liquids. UV and laser specific protective goggles are also available.

6.2.2 Always wear appropriate footwear. Bare feet, open toed shoes, sandals or high-heeled shoes are not allowed.

6.2.3 Wear gloves if physical or chemical contact hazards are present. No single glove material provides effective protection for all uses. Review the MSDS/SDS to determine of the gloves is compatible with the chemicals you are using. In addition, always inspect the gloves for rips and tears before use. Do not use expired gloves. Common glove applications requirements include the following:
   - Nitrile gloves for chemical hazards.
   - Use insulated gloves (Kevlar) for hot materials or broken glass.
   - Use cryogloves for extra cold materials such as liquid nitrogen, dry ice etc.
   - Always don Kevlar or leather when cutting or breaking glass.
   - Wear two pairs of gloves (double glove) when extra protection is necessary.

6.2.5 Gloves must be removed before exiting the workplace, handling a doorknob or phone, using instrumentation or a computer etc. The gloves should never be disposed of in the hallway waste receptacle. Put new gloves on when you return to work. If you must use a glove for protection while moving hazardous materials to a different location, etc., take one glove off and use the bare hand to manipulate the doorknob, etc and carry the material in the gloved hand.

6.2.4 The use of lab coats or aprons is not required at Colby College. The use of lab coat or apron will, however, provide an additional protective layer against a spill or burn and is highly recommended.

6.3 Requirements for Personal Hygiene:

6.3.1 Eating, drinking (including water), chewing gum, applying makeup or lip balm and smoking are prohibited in laboratories or storage areas. Never store food or drinks for human consumption in a lab freezer or refrigerator. Do not place any food or drink cups in the laboratory trash. Always use a hallway waste receptacle. Food and drink may be placed outside of the lab door if necessary.

6.3.2 Do not touch your face when working in the laboratory, especially when wearing gloves.

6.3.3 Always wash your hands before leaving the laboratory or studio.

6.3.4 Never mouth suction to pipette anything, not even water. Always use a pipet bulb or pump.

6.3.5 Do not wear loose clothing or hanging jewelry. Tie long hair back when working in a laboratory.

6.3.6 Wear appropriate clothing in a laboratory or studio. Proper clothing will provide a degree of protection in the case of a splash or spill. Exposed skin is always at
risk. Shorts, halter tops, sleeveless shirts and "belly shirts" all increase potential skin exposure.

6.4 Housekeeping Requirements in the Lab:

6.4.1 Use of extension cords is prohibited for powering fixed equipment and large appliances. Extension cords may be used to power portable equipment on a temporary basis.

6.4.2 Access to emergency equipment, showers, eyewashes exits and spill kits must never be blocked. In addition, keep all fire lanes free of equipment.

6.4.3 Fume hoods, bench tops and floors are not to be used for long term chemical storage. Return materials to their proper storage place when not in use.

6.4.4 All laboratory waste must be properly disposed of at the end of each day.

6.5 Equipment Specific Lab Safety Requirements:

6.5.1 Laboratory Chemical Hoods: Laboratory chemical hoods are one of the most important components used to protect personnel from exposure to hazardous chemicals and other harmful agents. The hoods are inspected by PPD twice a year to verify proper function.

- Keep the hood exhaust fan on at all times when working with hazardous substances.
- If possible, always use the hood sash at the designated position (found on the front face of the hood). This assures proper face velocity. Work is performed by extending the arms under the sash while keeping the head outside of the sash. Always attempt to keep the sash between the person and the hazard.
- To reduce turbulence and reduction of air flow, move the sash up and down slowly and avoid rapid body movement when in front of the hood.
- Work at least six inches inside of the hood (behind the face). This assures that the highest concentration of the contaminant is away from the face of the person and the hood. Place equipment as far back as possible but do not block the back baffle.
- Use racks to support any equipment used in the hood. Avoid using large pieces of equipment in the hood that can block airflow.
- Never modify a hood in any way to adversely affect its performance.
- Never use a hood if the safety alarm is sounding. Notify your supervisor or responsible faculty member to submit a work order to PPD to have the hood repaired.
- Never use a hood for chemical storage. Only a labeled spill kit and NFPA labeled vented safety bottles may be kept long term basis in a hood.
- If reactions must be left unattended or overnight the responsible personnel must ensure that the reaction is stable, properly secured and labeled. Required labeling elements include the specific details regarding the chemicals involved and emergency contact information.
- Do not routinely leave reactions unattended in the hood. If you must run a reaction overnight, be sure that the equipment is secured and the hood is well
labeled with specific details regarding the chemicals involved and your contact information.

- Certain hoods are designated for special use and have been modified for the specific hazard. Please use these hoods when necessary and try not to use them for general use. Examples of specific hoods at Colby are Mutagen Hoods (for the use of mutagenic chemicals such as ethidium bromide and acrylamide), Hydrofluoric Acid Hoods that have special modifications for HF fumes (corrosive and toxic), heat transfer hoods (used to pull heat away from instrumentation such as the AA, ICP, CH0), Cell Culture Hoods for tissue culture, and laminar flow hoods that maintain sterile environments (biohazards).

6.5.2 Vacuum Safety: Vacuum work can result in implosions. Careful set up and operation are important to reduce the chance of flying glass, spattering chemicals and fire. It is imperative that safety goggles be worn at all times when operating vacuum equipment. The use of a fume hood is also highly recommended when working with vacuums. If a hood is not used, it is recommended that a face shield also be worn over safety goggles.

- Know how to properly set up and operate the vacuum system in use. Always use good support to reduce the strain on the necks of the glassware. Vent the system slowly and completely before disassembling.

- Use a trap to avoid water, solvents and corrosive gasses from entering the system. Avoid water aspiration. Pressurization hazards can be avoided with the use of a bubbler.

- Take proper care of the vacuum pump. Use traps and clean the oil often. Notify your supervisor or PPD if the pump is leaking oil. Clean, used oil is a non-hazardous waste but must be labeled as such and disposed of in Keyes Room #4. Do not put oil down the sink or into the general trash. Contaminated oil (solvents, mercury, corrosive substances etc.) is a hazardous waste.

- Before use, check for flaws in the glassware by holding it to the light. Use only glassware suitable for subambient pressure. Pyrex/Kimax glass is recommended.

- Never carry or move an evacuated vessel (dessicators, flasks, etc.)

7.0 REQUIREMENTS FOR CHEMICAL LABELING, TRANSPORT AND STORAGE

7.1 Chemical Labeling Requirements:

7.1.1 Primary containers must have an intact label as printed by the manufacturer. If the label has become damaged or missing on usable chemicals review the MSDS/SDS to determine the correct language and relabel the container.

7.1.2 Secondary containers used for long term storage in laboratories must be marked with the product name as well as an NFPA diamond. See Appendix 1 for additional information regarding the NFPA Diamond.
7.1.3 Single use day containers under the control of the laboratory personal using the container do not have to be labeled.

7.2 **General Chemical Transport and Storage Requirements:**

7.2.1 The following lists general chemical storage and transporting requirements for all Colby labs.

- Avoid storing materials and equipment on top of cabinets.
- Avoid storing chemicals on shelves higher than 5 feet. If due to space constraints, chemicals must be stored on high shelves, avoid overreaching and always use a stepstool to access the materials.
- Store heavier materials on lower shelves.
- Keep egress routes, passageways, areas under tables or benches and emergency equipment free of stored materials.
- Provide a defined storage area for each hazard class. Observe all precautions regarding incompatible chemicals. Put the chemical back in the proper storage area when no longer needed.
- Ventilated spaces should be used for volatile toxic and/or odiferous chemicals.
- Store chemicals in a labeled, closable cabinet or on a labeled shelf. Flammables should always be stored in an approved flammable liquid cabinet or in flammable and/or explosion proof refrigerators.
- Use secondary containment (polypropylene trays and dishpans, and/or corrosion resistant storage trays) to catch spills, leaks, drips etc.
- Never store chemicals in a hood, on the floor or bench top. Always put chemicals away at the end of the day.
- Do not store chemicals in direct heat or light.
- Dispose of old and/or expired chemicals, bottles with worn or missing labels, bottles with missing or broken caps, and bottles with any type of leakage including smell.
- Use appropriate carts, plastic carriers and PPE when transporting chemicals. If you borrow a cart or a carrier from any of the stockrooms, return it as soon as possible.
- Use appropriate carts for transporting gas cylinders. Always use the chain to support the gas cylinder on the cart. Be sure that the cylinders are always stored and used in the upright position and securely fastened to the wall or bench top using a belt or chain support. Always use the proper regulator. Regulators are gas specific.
- Store empty gas cylinders with the cap on, in the upright position. They must be securely fastened using a belt or chain, even when in a cage. All cylinders must be tagged "EMPTY, IN USE, or FULL".
- NFPA Standard 45 (NFPA, 2004) limits the quantity of flammables and combustibles in the workspace based on room design, fire control, location in the building, fire control systems, flammable storage design and the type of laboratory or studio (academic, research, industrial, etc.). Colby is allowed by
NFPA 45 to stored up to one 20 liter drum of solvent on the floor of any laboratory/studio.

8.0 WASTE MANAGEMENT

8.1 Types of Laboratory Waste:

Lab waste may fall into a number of different categories and management requirements. It is the responsibility of the faculty member who oversees the laboratory to properly characterize and manage the waste generated in their labs.

8.1.1 Laboratory waste will fall under one or more of the following categories.
- Solid waste
- Hazardous waste
- Radioactive waste
- Biomedical waste

8.2 Hazardous Waste:

8.2.1 Per Federal and States laws, the properties of hazardous waste are defined as any substance that exhibits one or more of the following hazardous characteristics: IGNITABILITY (flash point less than 140F), CORROSIVE (pH less than 2 or greater than 12.5), REACTIVITY reactive to water, shock, heat, and/or pressure, or gives off toxic gases, or unstable and reacts rapidly or explosively, and TOXICITY (that which will leach more than a specified amount of heavy metals, pesticides, and carcinogens/mutagens). If you find a waste at your site that has no product information, please contact the CHO. Do not assume that the waste is nonhazardous. The MSDS/SDS, bottle label and manufacturer’s information are also resources in determining if the laboratory waste is a waste is hazardous.

8.2.3 Quantofix Peroxide 100 test strips are available upon request from the Departmental Safety Coordinator to determine the level of peroxide formation in stored chemicals. Peroxide containing chemicals require special handling. Please contact the CHO if the strip tests positive for peroxides.

8.2.4 Broken mercury thermometers do not go into the general trash, glass waste or sharps waste. Place broken mercury thermometers in the designated container located in a Satellite Accumulation Area (SAA). Mercury is a toxic heavy metal and is a hazardous waste. Non-mercury thermometers (these have red, blue or green nontoxic liquid) can be disposed of in a glass waste container. Do not put non-mercury thermometers in the general trash.

8.2.5 Hazardous waste must be accumulated/stored in a Satellite Accumulation Area (SAA) for disposal to the Hazardous Waste Storage Room in Keyes Room 4 by the CHO.

8.2.5.1 There are many SAAs on campus listed in Appendix 2. A waste generator can use any of the campus SAAs as long as the SAA is approved and compatible with the waste. The SAAs are clearly labeled and are monitored weekly for proper use. Each SAA has reminder sheets for waste identification, proper use, and separation based on incompatibilities.
8.2.5.2 Guidelines for safe use of a SAA include the following:

- Choose a SAA near your work area. Do not attempt to carry hazardous waste unlabeled, uncovered, without secondary containment or over long distances.
- Use proper personal protective equipment. Goggles are a required and gloves are highly recommended.
- Choose the properly labeled waste container that suits your hazardous waste, if there is a compatibility issue, you must use a different SAA.
- You can move this container under a nearby hood to transfer the waste if it is difficult to use the SAA due to space constraints. After transferring the waste, always put the waste container immediately back into the SAA area.
- Check to see that the container is not leaking, bulging, etc.
- Remove the lid and use a funnel to add your waste. Spilling solvents will make the label illegible and potentially result in mixing of incompatibly waste. When complete, replace the lid and make sure that it is secure.
- For mercury spills, a separate mercury waste container can be found in most SAAs. Place the mercury metal under the water in the container to contain mercury vapors. Liquid mercury spills are also added to the water. The containers are pre-labeled for mercury waste. Broken thermometers small enough to fit, may be placed directly in the container. A sealed, labeled plastic bag can also be used, if the thermometer cannot fit in the special SAA container.
- Ethidium bromide (EtBr) and acrylamide liquid and solid hazardous waste should be collected in a separate container in all SAAs near any workspace that uses these mutagens. An EtBr spill kit must be included in the workspace to ensure proper cleanup.
- Any chemical, buffer or reagent mixture that has several known incompatibilities can have its own waste container (if room in the SAA allows). Contact the Departmental Safety Coordinator to add a SAA container.

8.3 Biomedical and Radioactive Waste:

8.3.1 The disposal of radioactive and biohazard wastes is described in the Colby College Radioactivity and Biohazard plans and will not be addressed in the LSP. Contact the CHO for information about radioactive and biohazard waste.

8.4 Sharps:

8.4.1 Needles and scalpels must never put in the general trash. All sharps must be disposed of in a designated sharps container in every lab and prep room. If the container has a biohazard label included by the manufacturer, remove or cross off the biohazard information. Syringes that do not contain any hazardous materials may be put in the general trash. When full, the sharps container must be closed.
securely and placed in the waste room, Keyes 4, for disposal. This does not include syringes and sharps contaminated with biohazards or radioactive materials, which must be managed specifically as biohazard or radioactive waste. Please see the Departmental Safety Coordinator if you need a sharps container.

8.5 **Solid Waste:**

8.5.1 Every SAA location has a solid waste container for solid nonhazardous chemical waste. No chemicals should ever be placed in the general trash. Used filter paper and silica gel must also be collected in these containers if they contain excess chemicals.

8.5.2 Empty Bottles and Containers

- Air out empty flammable solvent bottles or odiferous containers under a hood before using the trash.
- It is recommended that the labels are removed or crossed out using permanent marker before using the trash.
- Only use the general trash receptacle inside the workspace.
- If the bottle is damaged or broken, use the glass waste receptacle. Do not place in the general trash. The broken glass should never contain any amount of hazardous chemicals that could lead to irritating odors or volatile fumes. When the glass trash container is full, please close, secure the lid with tape, and label as trash. Properly labeled secured glass boxes may be put into the dumpsters.
- Recycling an empty container is highly recommended.

8.5.3 Ethidium Bromide containers:

- Filter the aqueous EtBr waste solutions (free of other contaminants) through a bed of activated charcoal. The filtrate may be poured down the drain. Place the used charcoal in a sealed container and label as a hazardous waste. A special EtBr liquid and solid waste container should be included in every SAA near any workspace that uses this mutagen.
- Trace amounts of EtBr (less than 0.1%) in electrophoresis gels do not pose a serious hazard so they can be discarded in the trash if properly bagged and secured. If the gels contain more than 0.1% EtBr they should be placed in an appropriate container for hazardous waste disposal. Aqueous Solutions can be decontaminated or deactivated using charcoal filtration. An EtBr Spill Kit should be kept near any workspace that uses this mutagen.

9.0 **HAZARD COMMUNICATION**

9.1 **Door Signs:**

9.1.1 Outside of each laboratory or studio door there must be a list of the contact personnel for that workspace and GHS pictograms showing the hazards located in that room. This information is essential in the case of an emergency. Please be familiar with the hazards in your lab. Appendix 3 details each GHS pictogram and related hazards.
9.1.2 Select departments will also have Hazard Identification forms (HIF) and Standard Operating Procedures (SOP) that will further aid in the identification of hazardous materials and/or procedures specific to that workspace. These forms are included in the package so that emergency personnel unfamiliar to the workspace can readily identify what hazards are present and where the hazards are located in the workspace before they enter the room. The HIF will identify the specific hazard and the location of each. The SOP will identify a specific hazard and/or procedure and how to best respond to that particular hazard.

9.1.3 Lab Safety Summary Sign: Inside each laboratory is a yellow sign that displays the emergency phone extension and several tips to ensure a safe working environment. Please be familiar with and follow these safety tips at all times:

9.1.4 All door signage, HIFs and SOPs are reviewed and updated annually to ensure that he information is correct and current.

9.2 MSDS/SDS:

9.2.1 MSDS/SDS are the primary source of information regarding a chemical’s properties, hazards, proper handling and storage.

9.2.2 The location of the MSDS/SDS binders is listed in each Departments DLSP.

9.2.3 MSDS/SDS maintained by PPD are maintained in break room in the Data Sheet cabinet and in each custodial closet around campus.

10.0 LABORATORY EMERGENCIES

10.1 General Guidelines:

- If you cannot assess the conditions well enough to be sure of your own safety, do not enter the area. Call emergency personnel and describe the situation as best you can.

- In the event of an accident, do not leave the area until reporting the accident to a faculty member or Security.

- A written spill (Appendix E) and accident report (Appendix F) must be submitted to the CHO following the verbal report within 24 hours.

- All laboratory and studio personnel should know what to do in the case of an injury, spill, fire, accident and any other emergency specific to that workplace. No one should start to work until they know the location and how to operate the emergency equipment, the location of available exits, their role in emergency response and how to report the emergency to summon help and document the event.

- When the Health Center (HC) is open, all minor/moderate student injuries should go to the HC for evaluations. The HC is open 8-8 Monday-Friday and 12-8 Saturday-Sunday.

- Injury victims must always be accompanied by other students or Security when traveling to the Health Center or local hospital.

10.2 Chemical Injury Response:

10.2.1 General treatment of contaminated personnel:

- If an individual is injured or contaminated with a hazardous substance, the responder must tend to that individual before implementing spill control. If
possible, obtain information about the materials being used and provide
copies of the MSDS/SDS to the Health Center or other medical provider.

- For small areas of skin, immediately flush with flowing water for no less than
  15 minutes.
- A location list of all emergency eyewash and shower stations is attached as
  Appendix G. The stations are inspected monthly and documented on tags
  attached to the units. If an emergency eyewash or shower inspection is not
  completed in your area contact the CHO to arrange for completion.
- Immediately call emergency personnel in the case of the ingestion of a
  hazardous material.

10.2.2 Chemical burns to the eyes: Chemical eye burns result from eye contact with
strong bases and acids. In the event of a chemical eye burn, the injured person
must flush their eyes for 15 minutes in the emergency eyewash. Bystanders must
immediately contact Security at 859-5911 to summon emergency assistance.

10.2.2.1 Use of an emergency eyewash:
- Pull the valve handle forward which will dislodge the dust caps. The flow of water should be immediate.
- Flush the eyes for no less than 15 minutes. This is not easy for an
  injured person, so try to hold their eyes into the flow of water by
  firmly holding the head down for as long as possible.
- Returning the valve handle to its original position will stop the
  flow of water.
- Resume flushing the eye if pain returns.
- If no eyewash is available, place the injured person on their back
  and pour tepid water into the eyes for at least 15 minutes. Hold
  the eye open and instruct the injured to roll the eyeball to aid in
  proper washing.

10.2.3 Large scale chemical burns:

10.2.3.1 Use an emergency shower:
- Quickly remove contaminated clothing
- Stand under the shower and pull the handle. The flow of water
  should be immediate and should last for at least 15 minutes.
- Contact emergency assistance
- Resume if pain returns.
- A fire blanket can be used for privacy if necessary.

10.2.4 Treatment of Hydrofluoric Acid Contamination: HF can cause severe systemic
toxicity from even relatively small dermal exposures. Exposure to this compound
should be treated with extreme caution. Treatment involves a calcium or
magnesium gluconate antidote that works by combining with HF to form
insoluble calcium fluoride, thus preventing the extraction of calcium from tissues
and bones. If exposed, seek immediate medical help, successful treatment
requires prompt medical treatment.
10.2.4.1 Know the location of the HF Treatment Kit and always check the expiration date of the calcium gluconate antidote before conducting procedures using HF.

10.2.4.2 HF skin contact response procedures:
- Call for help immediately and notify Security at Extension 5911.
- Remove contaminated clothing immediately
- Decontaminate by irrigation with copious amounts of water. Flush the affected areas using the safety shower a minimum of 5 minutes.
- Apply Calcium gluconate gel liberally to the affected area.
- If the contamination is limited to the fingers then immerse the fingers in a liquid antacid (Equate or Mylanta) after applying the Calcium gluconate.
- Place ice packs on the affected area. This will retard the diffusion of the fluoride ion further into the skin.
- Stay with the victim until help arrives.

10.2.4.3 HF eye contact procedures:
- Call for help immediately and notify Security at Extension 5911.
- Hold the eyelid open and flush the affected eye (or both eyes) for a minimum of 15 minutes.
- Place ice packs on the affected eye. This will retard the diffusion of the fluoride ion into the eye. Do not use oily drops, ointment or HF skin burn treatments.
- Stay with the victim until help arrives.

10.2.4.4 HF inhalation response procedures:
- If the area is safe for you to enter, immediately move to fresh air and call for emergency help.

10.2.4.5 HF ingestion response procedures:
- Ingestion of HF is life threatening. Seek immediate medical attention.
- Drink large amounts of water or milk to dilute the acid. Antacids should be administered if medical help is delayed.
- Do not induce vomiting.

10.2.5 Treatment of Ethidium Bromide contamination:
- In the case of eye contact, flush eye(s) with water for at least 15 minutes lifting upper and lower eyelids occasionally.
- If skin is exposed, remove contaminated clothing and wash skin with soap and water immediately.
- If EtBr vapors are inhaled, remove to fresh air. If swallowed, get medical attention immediately.
10.3 Physical Injury Response:

10.3.1 In the case of a minor injury, a first aid kit may be used to stabilize the wound if necessary seek medical attention.

10.3.2 In the event of a minor cut, seek immediate medical attention at the Health Center or local hospital. For large laceration immediately contact Security at 5911 (859-5911 from a mobile phone) and remain with the victim.

10.3.3 Immediately call emergency personnel if the injured person appears to be unconscious. Stay with the victim until help arrives.

10.3.4 If the victim is having convulsions, immediately call emergency personnel. If it is safe to enter the area, remove anything from the area that may cause harm to the victim. Stay with the victim until help arrives.

10.3.5 If the victim has a cryogenic burn, immediately call emergency personnel. Do not apply heat. Loosen clothing to promote circulation and flush the area with tepid water to reduce freezing. Stay with the victim until help arrives.

10.4 Spill Response Guidelines:

10.4.1 All personnel who work in a laboratory in which hazardous materials are used must be familiar with the location of the spill kit.

10.4.2 Students may only assist directly with the cleanup efforts during minor spill response if they are familiar with the chemicals involved and comfortable with the quantity spilled.

10.4.3 Minor Spill Response Procedure:
- Always wear the appropriate PPE when responding to a spill.
- Never respond to a spill alone.
- Review the MSDS/SDS if unfamiliar with the chemical before responding.
- All spills must be documented on Appendix E, Spill Reporting Form and submitted to the CHO as soon as possible.

10.4.4 In the event of a large spill that poses an immediate threat to personal safety and cannot be safety controlled using a spill kit, immediately evacuate the area and any effected nearby areas and call Security. Stay nearby until help arrives so that you can report the situation to the emergency personnel.

10.5 Fires Response Guidelines:

10.5.1 Only trained responders are permitted to fight fires at Colby College. In the event of a fire alarm, if possible, stabilize any experiments and exit the building as quickly as possible. Congregate with the other building occupants at a safe distance from the building. Do not leave the area until told to do so by the responders.

10.5.2 Fire Response Procedures:
- The extinguishers are only to be used by trained personnel in the case of a small containable fire. Notify the CHO as soon as possible after an extinguisher is used. The CHO will notify the fire department and will see that the used extinguisher is replaced.
- Know your exit routes.
• Know the location of the nearest fire extinguisher, fire alarm-pull station, fire blanket, telephone, emergency contact list, safety showers.

11.0 RECORDS
11.1 Copies of the LSP are located in the Safety office, Security office, and the secretary's office for the programs and departments covered under this plan.

12.0 TRAINING
12.1 All laboratory personnel (including faculty, staff, research/honors students and classroom students) are required to be safety trained before starting any work in the laboratory or studio. All personnel will review, understand and follow all applicable safety rules and regulations that apply to the workplace and sign a safety agreement (Appendix D) that assures that they understand and agree to follow the LSP.

12.2 The training sessions will include the requirements and use of the LSP/DLSP, MSDS/SDS, PPE, general safety rules, where emergency equipment is located (safety eye wash, showers, spill kits, first aid etc), chemical management, and emergency procedures for accidents and spills.

12.2.1 Additional training may be required for special procedures specific to a laboratory. The PI responsible for that lab will be required to deliver and enforce that training.

12.3 It is the responsibility of the supervising faculty member and designated departmental safety coordinators (where applicable) to train faculty and staff employees when employment begins. The training will consist of the contents of the LSP, the employee's right to know about workplace hazards, the departmental labeling system and policies, the location and use of MSDS/SDS, the determination of hazards, protective measures, emergency procedures and reporting. Each department will maintain documentation of this training.

12.4 Students enrolled in laboratory classes, working as research assistants, or as student teaching assistants will be provided safety training by the course instructor or research mentor and designated departmental safety coordinators (where applicable) before any laboratory work begins. As part of this training, students will be provided with a copy of the DLSP and LSP where appropriate. At minimum they will know where the documents are kept. The department safety coordinator and the course instructor will explain the general procedures outlined in both plans, as well as any more specific policies that are relevant to the particular course.

12.5 Once faculty, staff and students have completed the safety training (and signed the Laboratory Safety Training Acknowledgement form), it will not be necessary to repeat the entire training for subsequent courses unless there is a change in federal,
state or College safety requirements. However, it will generally be appropriate to include a "safety training" element at the beginning of each laboratory course, to address issues that are specific to that course.

13.0 ENFORCEMENT

13.1 Failure to follow the policies and procedures outlined in the LSP could result in disciplinary action up to and including expulsion from school for students and loss of employment for faculty and staff, not to mention serious injury and/or property damage.

13.2 To insure that the guidelines in this document are being followed, the three designated Departmental Safety Coordinators in Chemistry, Biology and Physics, a faculty member from each of the other Departments (Geology and Psychology and Art), and the Colby EHS Director will conduct a biannual compliance inspection of each Department. At least one of these inspections may include a representative(s) from a non-Colby third party.
14.0 ACKNOWLEDGEMENT

14.1 By signing the LSP the following Colby Personnel are certifying that they have reviewed these procedures and safety requirements, find the contents acceptable and agree to ensure implementation within Natural Science Departments.

Wade Behnke  
Environmental, Health, and Safety Director  

Cathy Bevier  
Biology Department Chairperson  

Russ Cole  
Environmental Studies Director  

Melissa Glenn  
Assistant Professor of Psychology  

Paul Greenwood  
Associate Dean of Faculty  

Russell Johnson  
Chair, Division of Natural Science  

Lori Kletzer  
Dean of Faculty  

Julie T. Millard  
Chemistry Department Chairperson  

Duncan Tate  
Physics Department Chairperson  

Douglas Terp  
Vice President for Administration and Treasurer  

Herb Wilson  
Geology Department Chairperson

6/21/17  
Date  

5/28/14  
Date  

6/24/14  
Date  

5-29-14  
Date  

5-20-2014  
Date  

5-10-2014  
Date  

5/30/2014  
Date  

6/10/14  
Date  

6/10/14  
Date  

5/21/2014  
Date  

6/14/2014  
Date
APPENDIX A: NFPA Diamond Labeling Elements
NFPA DIAMOND LABELING ELEMENTS

All Secondary containers used for storage must be marked with the name of the chemical as well as the NFPA diamond.

The NFPA label provides basic hazard information on the flammability of the material (red square), reactivity (yellow square), health hazards (blue square) and special notice (white square).

The numerals in the boxes of the diamond indicate the severity of the hazard with "0" indicating little or no hazard and "4" indicating severe hazard. For example, acetone (the major component in nail polish remover) has the ratings:

That is, the health rating of 1 means acetone can cause some irritation, but only minor residual injury. The fire rating of 3 means acetone is flammable (flash point < 60°C). The reactivity rating of 0 indicates that acetone is stable under a variety of conditions, including exposure to water. The MSDS/SDS is a valuable source of NFPA information.
APPENDIX B: Satellite Accumulation Area Locations
<table>
<thead>
<tr>
<th>Building</th>
<th>Room</th>
<th>Location in Room</th>
<th>Dept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyes Science Building</td>
<td>305</td>
<td>Fume Hood next to fire exit door on left</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>303</td>
<td>Fume Hood #2</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>309</td>
<td>Fume Hood on outside wall</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>202</td>
<td>Fume Hood #1</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>203</td>
<td>Fume Hood nearest to PQ lab</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>204</td>
<td>Cabinet under Hood #2</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>205</td>
<td>Flam Cabinet under Hood #1</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>210</td>
<td>Cabinet under Hood #2</td>
<td>Chem</td>
</tr>
<tr>
<td>Keyes Science Building</td>
<td>409</td>
<td>Flam Cabinet Under Hood #3 on Left</td>
<td>Chem</td>
</tr>
<tr>
<td>Olin Science Building</td>
<td>221</td>
<td>Fume Hood</td>
<td>Bio</td>
</tr>
<tr>
<td>Olin Science Building</td>
<td>229</td>
<td>Fume Hood</td>
<td>Bio</td>
</tr>
<tr>
<td>Arey Science Building</td>
<td>301</td>
<td>Cabinet</td>
<td>Bio</td>
</tr>
<tr>
<td>Arey Science Building</td>
<td>202</td>
<td>Fume Hood</td>
<td>Bio</td>
</tr>
<tr>
<td>Arey Science Building</td>
<td>302</td>
<td>Fume Hood</td>
<td>Bio</td>
</tr>
<tr>
<td>Arey Science Building</td>
<td>401</td>
<td>Fume Hood</td>
<td>Psych</td>
</tr>
<tr>
<td>Mudd Science Building</td>
<td>308</td>
<td>Fume Hood</td>
<td>Physics</td>
</tr>
<tr>
<td>Mudd Science Building</td>
<td>213</td>
<td>Inactive</td>
<td>Geo</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>Paint Shop</td>
<td>Left Rear Corner</td>
<td>PPD</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>Garage</td>
<td>East Bay near Door</td>
<td>PPD</td>
</tr>
<tr>
<td>Steam Plant</td>
<td>Shop Area</td>
<td>By Parts Washer</td>
<td>PPD</td>
</tr>
<tr>
<td>Keyes Darkroom</td>
<td>Darkroom</td>
<td>K406A, near sink</td>
<td>Chem</td>
</tr>
</tbody>
</table>
APPENDIX C: GHS Pictograms
GHS Pictograms

Outside of each laboratory door there is a list of the contact person(s) for that room and symbols showing the hazards located in that room. Please be familiar with the hazards and PPE symbols listed for your lab.

The following pictograms are used to indicate physical hazards related to each chemical:

- Explosives
- Flammable Liquids
- Oxidizing Liquids
- Compressed Gases
- Corrosive to Metals

The following pictograms are used to indicate health hazards related to each chemical:

- Acute Toxicity
- Skin Corrosion
- Skin Irritation
- CMR, STO, Aspiration Hazard

In addition to the GHS pictograms, each lab will have symbols indicating the required PPE. Also for select labs, there may be signage indicating the presence of lasers, biohazards or other hazardous materials or processes.
APPENDIX D: Laboratory Safety Training Acknowledgment
LABORATORY SAFETY TRAINING ACKNOWLEDGEMENT

By signing this Safety Training Acknowledgement, I, __________________________ (Printed Name) confirm that:

- I have read and understand the Department’s Chemical Hygiene Plan and Colby College Laboratory Safety Plan.
- I will follow all safety rules found in the applicable Plan, including, but not limited to, proper protective equipment, chemical handling, emergency response, proper attire, hazardous waste handling, and no food or drink in labs.
- I will report any safety hazard to my instructor/professor/Safety Coordinator immediately.
- I will report any chemical spill to my instructor/professor/Safety Coordinator immediately.
- I understand that failure to follow the practices contained in either Plan could result in a downward grade adjustment and/or disciplinary action up to and including dismissal from Colby.
- I understand that failure to follow the practices contained in the Department’s Chemical Hygiene Plan or Division’s Laboratory Safety Plan could result in serious injury, or even death to a classmate or myself.

Signature: ___________________________ Date: ___________________________
APPENDIX E: Spill Reporting Form
## HAZARDOUS MATERIALS INCIDENT

<table>
<thead>
<tr>
<th>INITIAL NOTIFICATION</th>
<th>Date of Incident</th>
<th>Time of Incident: AM PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Building and lab Number</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Contact Information: Spiller/Responsible Party: Call back Person/Number:</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Type of Incident:</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Material Released and Quantity (if known):</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Is the Release on going: Yes No</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Released to: Soil Water Ocean Air Well Sewer Containment Other:</td>
<td></td>
</tr>
</tbody>
</table>

Submit to the CHO within 24 hours of the spill

Notification: Date: Time:
APPENDIX F: Student Accident Report Form
# Personnel Involved

<table>
<thead>
<tr>
<th>Name of Student:</th>
<th>Student Signature (if possible):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI Completing Form</th>
<th>PI Signature:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Accident Information

<table>
<thead>
<tr>
<th>Location of Accident (Bldg/Room):</th>
<th>Date and Time of Accident:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Injury and Body Part Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Accident (include any chemicals, equipment or PPE involved):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Describe medical care required and provider:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

# Witness Information

<table>
<thead>
<tr>
<th>Witness Name:</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Witness Name:</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Witness Name:</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Accident Investigation/Follow Up

<table>
<thead>
<tr>
<th>Cause of Accident:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corrective Action Taken to Prevent Recurrence:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

*Submit the completed Accident Report to the CHO within 24 hours of the accident*
APPENDIX G: Emergency Eyewash and Shower Locations
<table>
<thead>
<tr>
<th>Keyes Building 1300</th>
<th>Eye washes</th>
<th>Shower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement Hallway (004)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 105A</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 107</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>keys 202</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 203</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Keyes 205</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 207</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Keyes 209</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Keyes 2nd Floor Hallway</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 210</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 214</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 303</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 305</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 309</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 4th floor Hallway</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 405</td>
<td>X (x4)</td>
<td>X</td>
</tr>
<tr>
<td>Keyes 409</td>
<td>X (x4)</td>
<td></td>
</tr>
<tr>
<td>Arey Building 3800</td>
<td>X (x2)</td>
<td>X</td>
</tr>
<tr>
<td>Basement Hallway</td>
<td>X (x2)</td>
<td>X</td>
</tr>
<tr>
<td>Arey 102</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 109</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 111</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 1st Floor Hallway</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 201A</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 201</td>
<td>X (x4)</td>
<td></td>
</tr>
<tr>
<td>Arey 202A</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 202</td>
<td>X (x4)</td>
<td></td>
</tr>
<tr>
<td>Arey 204</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 205</td>
<td>X (x3)</td>
<td></td>
</tr>
<tr>
<td>Arey 206</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 207</td>
<td>X (x4)</td>
<td></td>
</tr>
<tr>
<td>Arey 2nd Floor Hallway</td>
<td>X (x2)</td>
<td>X (x2)</td>
</tr>
<tr>
<td>Arey 301</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 302</td>
<td>X (x4)</td>
<td></td>
</tr>
<tr>
<td>Arey 303</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arey 305</td>
<td>X (x3)</td>
<td></td>
</tr>
<tr>
<td>Arey 307</td>
<td>X (x3)</td>
<td></td>
</tr>
<tr>
<td>Arey 3rd Floor Hallway</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Olin Building 3566</th>
<th>Eye washes</th>
<th>Shower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olin 214</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 221</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 222</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 223</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 227</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Olin 228</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 319</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 320</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 323</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Olin 3rd Floor Hallway</td>
<td>X (x2)</td>
<td>X (x2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Plant Department Bldg.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash bay</td>
<td>X</td>
</tr>
<tr>
<td>Mechanic bay</td>
<td>X</td>
</tr>
<tr>
<td>Alford Athletic Center Ice Rink</td>
<td></td>
</tr>
<tr>
<td>Zamboni Room</td>
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</tr>
<tr>
<td>Chiller Room</td>
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<tr>
<td>Pipe Shop/Pool Chem Area</td>
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<th>Bixler Building</th>
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<td>Sculpture Studio 117 1934</td>
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<td>Photo Studio 278 2011 Sink</td>
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<td>Painting Studio 250 1946</td>
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<td>Mudd 109</td>
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<td>Mudd 214</td>
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<td>Mudd 319</td>
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APPENDIX H: LSP Revision History
This written program and attached procedures will be reviewed annually by the Chemical Hygiene Officer. The Plan requirements are amended as necessary to address changes which affect laboratory safety, new equipment or new chemicals. The Plan will also be amended if deficiencies are revealed during safety incidents or near misses.

<table>
<thead>
<tr>
<th>REVISION</th>
<th>DESCRIPTION OF CHANGE</th>
<th>REVISION EFFECTIVE DATE</th>
<th>REVISION COMPLETED BY: NAME / COMPANY</th>
<th>MANAGER APPROVAL / DATE</th>
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<tr>
<td>A</td>
<td>• Original Program</td>
<td>2009</td>
<td>Bruce McDougal, Colby College</td>
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<tr>
<td>B</td>
<td>• Revised format</td>
<td>May, 2014</td>
<td>Wade Behnke, Colby College</td>
<td>Mark Crosby</td>
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<td>• Changed hazard symbols to GHS symbols</td>
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<td>• Removed Department specific information</td>
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<td>• Revised Accident Form and Spill Reporting Form</td>
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<td>• Removed references to art studios</td>
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