Spill Prevention and Response Plan

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Prepared by the
Special Edition Art Project
General Manager Team

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1. Introduction

A hazardous spill is defined as the uncontrolled release of a hazardous chemical, either as a solid or liquid. Spills at the Special Edition Art Project (SEAP) may occur in either of the darkroom photography lab or the lightroom workshop. The challenges related to dealing with spills will vary with the type, volume, and concentration of the chemical or material involved and the potential exposures. Potential chemical spills within SEAP would generally involve small volumes of a variety of chemicals used in the photographic manufacturing environment. For most chemicals, exposure is the priority concern; whereas with others, such as exhausted photographic fixer, the more immediate concern is a release to the environment.

Regardless of the type or quantity of hazardous chemical or substance involved, the SEAP facility must implement measures to reduce the potential for spills and have a plan for responding to spills. This document describes generic methods for preventing spills, directly responding to spills of low or minor hazard, and the procedures for reporting and addressing larger, or major, releases at the SEAP facility.

This Plan first sets out the roles and responsibilities of everyone in the SEAP facility (Section 2), then summarizes spill prevention recommendations (Section 3), provides spill preparation guidance (Section 4), relates the general spill response procedures applicable to all chemical releases (Section 5), presents specific response guides to a variety of common spill types (Section 6), and relates the necessary reporting obligations in Section 7. The Appendices at the rear of the Plan include a flow chart summarizing spill response considerations (A), the recommended contents of spill kits (B), and a summary guide to these spill response procedures (C).

2. Responsibilities

The onsite General Manager or Supervisor has primary responsibility for coordinating the response to emergencies, including chemical spills. The onsite General Manager or Supervisor should ensure that workers are familiar with these procedures and receive necessary training. All workers should follow these procedures in the event of a chemical spill.

2.1. SEAP Facility

Everyone working within the SEAP facility are responsible for the following:

- Implementing measures to prevent potential spills of those hazardous materials within their use or control.
- Take all necessary steps to minimize the chance of spills when working with chemicals (see Section 3, Spill Prevention).
- To respond to spills that are within their capability based on their training and the available response supplies.
- To request assistance from the onsite General Manager or Supervisor when needed for preparedness or response training, incident planning, assistance in release response, or for response supplies.
- To report any spill incidents to the General Manager in case reporting to local, state, or federal authorities is required. The reportable quantity (RQ) is as little as 1 pound for many hazardous chemicals – less for some materials, or in the event a waterway is impacted.

2.2. General Manager and Supervisor

The General Manager and Supervisor are responsible for performing the following duties as representatives of SEAP:

- Ensuring that workers are trained in chemical spill response for their working area.
- Ensuring there are sufficient and appropriate spill response supplies in the working areas for the hazard characteristics and quantities of the chemicals or substances stored or handled.
- Taking all necessary steps to minimize the chance of spills when working with chemicals (see Section 3. Spill Prevention).

- Provide assistance in response to chemical spills, coordinating response and summoning of additional response personnel, and will be available after hours to provide assistance or direction in the event of a spill.
- Maintain records regarding inspections conducted, personnel training completed, emergency equipment testing, and spill kit maintenance.

3. Spill Prevention

The first step in chemical spill response is to prevent the exposure, release, or spill from happening in the first place. The working and chemical storage area should be examined to identify measures that can be taken to minimize the risk of a release occurring. These measures can be identified during regular worksite safety inspections. The precautions may include physical controls (secondary containment, safety cabinets); standard operating procedures (labeling, container specifications, lab procedures), or staff and worker training.

Chemical spills occur during five types of activities: Storage, Transport, Transfers, Usage, and Disposal. Safety Data Sheets (SDSs) must be maintained and made reasonably available for each chemical or product containing hazardous chemicals.

3.1. Storage

Storage may be temporary, long-term, or for daily use. Regardless, certain precautions must be taken:

- Ensure that all containers are properly identified with the common chemical name (not a formula), physical and health hazards (labels or words), and manufacturer. All containers must include these three pieces of information. This will be on all chemicals as received and must be maintained in a legible condition or be replaced when necessary.
- If a chemical material is removed from its primary container for use or dispensing, the secondary container must be labeled with the same information – chemical name, hazards, and manufacturer. Mixtures must also be so identified. The “manufacturer” name may be the individual preparing the material or decanting it to the working container.
- Store no more hazardous chemicals in a room or area (control area) than is allowed.
- Ensure shelving units, counters, or cabinets are sturdy. Shelves used for chemical storage should be securely fastened to the wall or floor to provide added stability. The shelves should have “lips” to prevent falling of the containers from the shelves.
- Do not overcrowd storage area, cabinets, or shelving units. Access must be provided for the identification of the materials and inspection of the area for spillage.
- Ensure chemicals are stored within easy reach of everyone in working or storage areas, and no higher than eye level. Large bottles and containers should be stored as close to floor level as possible. Liquid containers should be stored no higher than shoulder height.
- Corrosive chemicals should be stored in safety cabinets whenever possible.

- Do not store chemical containers directly on the floor where they might be knocked over and broken – unless they are in ULC approved safety cans or still in their original shipping carton and packing (and do not cause a tripping or egress hazard).

- Minimize the number of chemicals and size of containers stored in the facility. A good rule of thumb is to keep quantities in the facility to a one-month supply.

- Ensure that lighting and ventilation is adequate in storage areas.

- Regularly inspect chemicals in storage to ensure there are no leaking or deteriorating containers. Some items to note:
  - Keep the outside of containers clean and free of spills and stains.
  - Check that caps and closures are secure and free of deformation. Use only screw caps on chemical containers in storage; foil, Parafilm, corks or other plugs are not acceptable.
  - Ensure that containers are free of rust, bulges or signs of pressure buildup.

- Do not store chemicals in unsuitable containers or containers made of incompatible material.

- Do not store incompatible chemicals together (e.g. acids with bases, oxidizers with acids). Within the SEAP facility, chemicals are generally stored within compatible photographic process groups.

- Any waste chemicals or products should be identified as waste or unwanted material and, if a hazardous waste, be so identified. Contact the General Manager for waste characterization assistance or removal.

3.2 Transport

- When transporting large, heavy, or a multitude of containers use a cart suitable for the load with high edges or spill trays that will contain any spills or leaks. Two people should be involved when transporting large amounts of chemicals.

- Carry glass containers in bottle carriers or another leak resistant, unbreakable secondary container.

3.3. Decanting

- When transferring chemicals between containers, pay careful attention to the size of the receiving container to prevent overfilling it.

- Use funnels and spill containment trays to catch leaks and spills when transferring liquids.

- Ensure that the materials are compatible prior to mixing. Follow mixing guidelines per the chemistry being used.
- Remember to label the secondary container with the material name, hazards, and manufacturer. The “manufacturer” name may be the individual preparing the material or decanting it to the working container.
- Perform the material transfers only in locations with containment to capture or retard the escape of any spillage to the environment or drains.

3.4. Handling and Use

- Ensure that ventilation is adequate for the chemical or material being handled, used, or applied. Remember that vapors, particulates, or odors may cause exposure to persons not in the immediate vicinity.
- When setting up and working with photographic laboratory apparatus:
  - Inspect laboratory glassware for cracks or defects before using it.
  - Secure flasks and beakers to prevent them from tipping over. Ensure the work area is free of unnecessary clutter.
  - Select equipment that has a reduced potential for breakage (e.g. Pyrex).
- When planning working sessions, anticipate possible accidents and provide controls to deal with problems that may occur.
- If you must work alone, ensure the working alone protocol addresses chemical spill response as part of the emergency procedures.
- Ensure you have access and know the location of a suitable spill response kit before you start working with chemicals.
- Know the location and how to use emergency equipment such as eye washes, be aware of the exits and evacuation routes, telephone locations, and Safety Data Sheets.

3.5. Disposal

Photochemicals are the general class of chemistry used within the SEAP facility, and of those, silver bearing exhausted photographic fixer is the primary chemistry to require special handling before disposal. Exhausted fixer will be controlled to have its silver content recycled via the Santa Cruz County business oriented Conditionally Exempt Small Quantity Generator Program. The 2017 CESQG Program loading rate, prescribed by State and Federal hazardous waste

laws limit the use of household hazardous waste collection programs to households and those businesses that generate less than 100 kilograms (about 27 gallons or 220 lbs.) of hazardous waste per month.

Pending developing chemistry used, photographic developer and stop bath must be combined in a container to neutralize the solutions before being put down the sink. No concentrated photochemicals of any kind can be placed in the trash or sink.

The following are some general precautions:

- Properly identify the contents of all waste containers and the associated hazards to avoid unsafe or inappropriate disposal.
- Be knowledgeable of the types of waste you may generate (hazardous waste, universal waste, solid waste, etc.) and how to properly identify, label, and arrange for dispose of the wastes.
- Do not mix incompatible wastes together – otherwise unexpected or uncontrolled chemical reactions may occur.
- Notify the onsite General Manager or Supervisor of any waste (or recyclable) materials requiring disposal. Do not deposit waste chemicals in the trash or down the drain without approval. Do not leave chemical wastes near dumpsters or other locations without notifying the onsite General Manager or Supervisor for prompt and separate pickup.
- With the exception of developing fluid, leave at least 10% air space in bottles of liquid waste to allow for vapor expansion and to reduce the potential for spills due to overfilling. Developer is a special case as it loses potency when exposed to air.
- When not in use (emptying or adding contents), keep waste containers securely closed or capped.
- Dispose of waste on a regular basis; do not allow excess waste to accumulate in work areas. Contact the onsite General Manager or Supervisor for waste pick-up to ensure prompt and proper disposal.
- Be sure that any containers being discarded have been emptied. Containers storing some chemicals (photo processing chemicals for example) must be triple rinsed before discarding.

4. Spill Response Preparation

Emergency preparedness is an important element of a spill response plan. When prepared for chemical spills fewer errors are made and there is a reduced risk to persons, property and the environment. The essential elements of spill response preparation are: Training, Hazard Information, Proper Equipment, and Written Procedures as described below.

4.1. Training

Spill response training is provided by SEAP to all workers using the facility. This training normally includes, but is not limited to: Review of these Spill Prevention and Response guidelines, instruction in spill cleanup techniques and equipment, and review of hazards found in the work area which may be of concern during spill response.

4.2. Hazard Information

Information on the chemical hazards present in the facility must be kept up-to-date and readily available. Sources of information include Safety Data Sheets, signs, container labels, posters, and reference books. The General Managers are responsible for ensuring that this information is readily available to workers in the facility.

4.3. Equipment

The General Managers are responsible for ensuring that an adequate supply of spill response and personal protective equipment is maintained in the facility. The type of equipment required includes: first-aid equipment (including emergency eye washes), personal protective equipment (gloves, eye protection, etc.), and spill cleanup supplies (absorbents, neutralizing agents, etc.). Recommended contents for generic spill kits are provided in Appendix B; however, spill kits and PPE will be customized to account for specific hazards and conditions within the SEAP facility.

4.4. Procedures

The procedures given in Sections 5 and 6 provide guidance for responding to a variety of chemical spills and Appendix A includes a flow chart summarizing the considerations and actions which should be taken in both assessing and responding to spills and releases. A copy of this procedure should be made available to workers within the facility. Appendix C includes a summary guidance sheet for initial spill assessment and response.

5.0 Spill Response Procedures

When a chemical spill occurs, workers at the spill scene must act quickly to reduce the consequences of the spill. The actions taken depend on the magnitude, complexity, and degree of risk associated with the spill. Refer to Appendix A: Spill Response Flowchart, and Appendix C for summary spill response and reporting procedures. The following steps outline the general actions which should be taken in response to chemical spills. However, because the appropriate response often depends on the identity or characteristics of the material spilled, a series of Spill Response Guides have been developed for certain categories of chemical materials. Those are provided in this section immediately following the general response steps listed.

1. Stay clear and warn others.
   - Proceed with caution and advise others that are in the immediate area of the spill of the potential danger.

2. Assist injured or contaminated persons.
   - If persons are injured, provide first-aid if you or another available individual is trained to do so. If persons have been contaminated by the spilled chemical, lead them to the nearest eyewash and assist in washing off the material. However, do not put yourself at risk and become a casualty. Injuries resulting from chemical spills may be medical emergencies, and Public Safety (911) should be immediately notified when this occurs.

3. Assess the situation. Is this an emergency?

An emergency situation exists when there is a high risk to:

- Persons
- Property
- Environment

The following Spill Response Guides provide information on the quantity of spilled material that is considered an emergency, or major spill, for different classes or types of hazardous chemicals. These amounts are for guidance only. Spills of amounts less than that listed may also constitute an emergency depending on the circumstances. Always consider the whole situation when determining if an emergency situation exists or not. Whenever a spill occurs in a public area, immediately contact the onsite General Manager, Supervisor or Public Safety (911).

If an emergency arises, isolate the area and contact the onsite General Manager, Supervisor or Public Safety (911). When informed of an emergency situation, the the onsite General Manager or Supervisor, in addition to responding themselves, will contact the appropriate medical or emergency response persons or team. For this purpose, specific information is needed from the person reporting the incident. This information must include:

- Identity of the person making the report.
- Nature of the incident (fire, explosion, chemical spill, gas leak).
- Location of the incident (location within the facility).

- Any injuries or exposures to chemicals?
- What is the identity of the material and its physical state – liquid, solid, gas?
- Is any of the hazardous material escaping from the spill location – vapors/fumes, run-off?
- When and how the incident occurred.

4. Get help for all but minor spills.

If an emergency does not exist, assistance from outside the immediate work area may still be required. Consider the following:

- Number and response training of persons required.
- Personal protective equipment required.
- Spill abatement material required.
- Nature of the spill (e.g. amount spilled, physical state, hazards of the spilled chemical).
- Is the situation worsening – spreading, fumes, liquid run-off to other areas or drains?

Minor spills or spills of chemicals of low toxicity and/or volatility can be handled by trained and equipped personnel at the facility. These are often referred to as incidental spills. More serious spills up to the amounts listed in the following Spill Response Guides may be handled by workers, perhaps with assistance from the onsite staff. If the nature, quantity or location of the spill exceeds the capacity of facility workers to deal with it safely and effectively, then outside help must be requested by contacting the the onsite General Manager, Supervisor or Public Safety (911). If there is any doubt regarding the ability of the onsite General Manager or Supervisor to handle a chemical spill, always contact Public Safety (911) and request assistance.

5. Control and clean-up the spill.

The following Spill Response Guides provide information on the hazards of spills and how they should be handled in terms of containment, treatment, and clean-up. In all cases, consult the material's Material safety Data Sheet to obtain more specific information on the chemical spilled to be sure it is cleaned up safely and effectively.

6. Report the spill.

If not already done, report the spill to the onsite General Manager or Supervisor. All spills, even those which do not require outside assistance, must be reported. See Section 6 (following the Spill Response Guides) for details on the reporting requirements and procedures. The General Manager will, in turn, make any required reports to the appropriate regulatory agencies. Further information on reporting spills is provided in Section 6 of this Plan, which follows the Spill Response Guides.

Remember: Any spill of a hazardous chemical material must be contained and cleaned up, regardless of quantity or location.

6.0 Spill Response Guides

The following Spill Response Guides summarize procedures for responding to many types of spills or releases that have occurred, or are likely to occur, within the SEAP facility. No SEAP facility workers, however, should attempt to cleanup or confine these, or other hazardous materials, unless they have received the training to do so, feel confident in doing so, and have the necessary personal protective equipment and spill cleanup supplies to do so in a safe and protective manner.

While some of the guides may suggest criteria for minor versus major spills, the above criteria should always determine whether or not you should attempt to control the release – or secure the area and call for outside assistance.

Spill Response Guide No. 1: Acid Spills

Citric Acid is the primary acid used within the SEAP facility where the principal concern is the corrosive effect of this substance. Neutralization is the primary response measure.

Spills of less than 1 liter / 500g can be cleaned up by facility workers who are adequately trained and have the proper spill response equipment available. If this is the case, proceed as follows:

For a liquid acid spill:

1. If spill absorbent is available in the immediate area, dike around the spill (see Step 7 below) if it is safe to do so. This will prevent the spill from spreading further. Spill absorbents are available that are specifically designed for acid and caustic spills. Also, powder and liquid neutralizers are commercially available to neutralize the spilled chemical and reduce the hazards of cleanup.

2. Isolate & evacuate the spill area.

3. If it can be done without exposure to the spilled substance, plug or cover any open sink or floor drains that may allow escape of the spilled substance.

4. Assemble assistance if needed, and the spill response kit outside the spill area. Obtain and read the MSDS for the substance to determine the hazards associated with it and any special precautions that will need to be taken.

5. Don the appropriate personal protective equipment. Depending on the scale of the spill and properties of the spilled substance, this can include:
   a. Gloves as recommended by SDS or glove manufacturer
   b. Splash goggles or face shield
   c. Shoe covers or rubber boots
   d. Lab coat or Tyvek coveralls

6. If not already done, dike around the spill using spill absorbent or spill pillows. Ideally, use spill absorbent that contains a mild neutralizing agent such as sodium carbonate (soda ash).

7. Carefully cover the spill area with spill absorbent or spill pillows, starting at the outside and working inward.

8. Sweep up the residue using spark-proof tools and place the residue into a labeled, plastic, waste container (plastic pail with lid or double heavy duty plastic bags). Contact the onsite General Manager or Supervisor for proper removal and disposal of the spilled material and contaminated cleanup articles.

9. Check the pH of the spill area. If it is less than pH6, then neutralize with a dilute solution of 5% sodium bicarbonate (baking soda).

10. Mop the affected area using detergent and water. Dispose of this water to the sanitary sewer.

11. Remove and bag personal protective equipment for cleaning or disposal. Contact the the onsite General Manager or Supervisor for pickup and disposal of the spilled material and residuals and to verify the adequacy of the cleanup.

Once the spill has been cleaned up, the area should be free of any acid fumes or vapors. However, if odors or irritation is still noted, isolate the area and wait at least 1 hour before reentering.

For a solid acid spill:

1. Isolate the spill area, assemble assistance if needed, and the spill response kit outside the spill area. Obtain and read the SDS for the substance to determine the hazards associated with it and any special precautions that will need to be taken.

2. Don the appropriate personal protective equipment. Depending on the scale of the spill and properties of the spilled substance, this can include:
   a. Gloves as recommended by SDS or glove manufacturer
   b. Safety glasses or goggles
   c. Lab coat

3. Spill absorbents are available that are specifically designed for acid and caustic spills. Also, powder and liquid neutralizers are commercially available to neutralize the spilled chemical and reduce the hazards of cleanup. If necessary, slightly moisten the solid, to minimize dust production. Use water, or if the material is water reactive, another inert liquid (e.g. ethylene glycol).

4. Sweep up the residue using spark-proof tools and place the residue into a labeled, plastic, waste container (plastic pail with lid or double heavy duty plastic bags). Contact the onsite General Manager or Supervisor for pickup and disposal of the spilled material and residuals and to verify the adequacy of the cleanup.

5. Remaining solid acid residue may be neutralized using a dilute solution of sodium bicarbonate (baking soda). Check the pH of the spill area; the final pH should be between pH 6 and pH 10. Use spill absorbent or spill pillows to absorb the neutralized residue.

6. Mop the affected area using detergent and water. Dispose of this water to the sanitary sewer.

7. Remove and bag personal protective equipment for cleaning or disposal. Contact the onsite General Manager or Supervisor for pickup and disposal of the spilled material and residuals and to verify the adequacy of the cleanup.

Spill Response Guide No. 2: Low Hazard Material Spills

Low hazard materials are those with no appreciable health hazard when encountered in quantities typical for the SEAP facility. In general, all spills of these materials may be cleaned up by SEAP workers unless there are other mitigating circumstances that require outside assistance, area evacuation and notification of the onsite General Manager, Supervisor, or Public Safety (911). If this is not the case, proceed as follows:

For a liquid spill:

1. If spill absorbent is available in the immediate area, dike around the spill (see Step 4 below) if it is safe to do so. This will prevent the spill from spreading further. Dike or cover any sink, floor, or yard drains in the vicinity that the spilled material may otherwise drain to and enter.

2. Move outside the spill area. Obtain and read the SDS to confirm that the material is of low hazard and can be cleaned up safely following this procedure.

3. Don the appropriate personal protective equipment. Depending on the scale of the spill and properties of the spilled substance, this can include:
   a. Gloves as recommended by SDS or glove manufacturer
   b. Safety Glasses or Splash goggles
   c. Shoe covers or rubber boots
   d. Lab coat, Tyvek coveralls, or other work clothes

4. If not already done, dike around the spill using spill absorbent or spill pillows. Loose absorbents and absorbent pads, pillows and socks are available specific to spill types – acid/caustics, water, and solvents. General clay-based absorbents, soil, or kitty litter are also suitable for general spills of low hazard materials.

5. Cover the spill area with spill absorbent or spill pillows, starting at the outside and working inward.

6. Sweep up the residue using available tools and place the residue into a labeled, plastic, waste container (plastic pail with lid or double heavy duty plastic bags). Contact the onsite General Manager or Supervisor for proper removal and disposal of the spilled material and contaminated cleanup articles.

7. Mop the affected area using detergent and water. Dispose of this water to the sanitary sewer.

8. Remove and bag personal protective equipment for cleaning or disposal.

For a solid spill:

1. Move outside the spill area. Obtain and read the SDS to confirm that the material is of low hazard and can be cleaned up safely following this procedure.

2. Don the appropriate personal protective equipment. Depending on the scale of the spill and properties of the spilled substance, this can include:
   a. Gloves as recommended by SDS or glove manufacturer
   b. Safety glasses or goggles
   c. Lab coat

3. If necessary, use water to lightly moisten the solid, to minimize the spread of dust. Do not add sufficient water to make the material mobile.

4. Sweep up the residue using available tools and place the residue into a labeled, plastic, waste container (plastic pail with lid or double heavy duty plastic bags). Contact the onsite General Manager or Supervisor for proper removal and disposal of the spilled material and contaminated cleanup articles.

5. Mop the affected area using detergent and water. Dispose of this water to the sanitary sewer.

6. Remove and bag personal protective equipment for cleaning or disposal.

7. Reporting Chemical Incidents

All chemical spills or exposures must be reported verbally, in writing, or via email to the SEAP General Manager

The report should include the date, time, location, description of the spill (e.g. type and quantity), noted injuries or exposures, equipment damage, any escape of material (e.g. into sewers or bodies of water), witnesses, and persons involved in supervision and clean-up of the spill. The report should be submitted to a SEAP General Manager as soon as possible following the spill – regardless of whether or not Public Safety (911) were notified.
The purpose of this reporting procedure is not to place blame, but to allow all required reporting to be completed, to ensure that the spill response and cleanup were adequate, and to identify measures that may prevent similar incidents in the future.

Depending on the chemical or material released, its quantity and location, any injuries or exposures that may have occurred, the environmental media affected, and a number of other factors, reporting to one or more regulatory agencies may be required under local, state, or federal regulations. Failure to make the required reports within the necessary timeframes, and to ensure that the necessary cleanup procedures were completed, can subject SEAP to significant penalties and corrective actions. Many times, a follow-up written report must be submitted regarding the spill or release.

Reporting can be triggered by even small amounts (less than 1 pound) of certain chemicals, or by any release that is not promptly and effectively cleaned up. SEAP General Managers may notify any of the following agencies or entities for assistance or to satisfy regulatory reporting requirements:
Santa Cruz Public Safety
Santa Cruz Fire Department
Santa Cruz Public Works Environmental Compliance

An emergency telephone listing follows. Contact with these entities in the event of a spill or release is restricted to the SEAP General Manager or Supervisor.

SEAP Emergency Phone List

SEAP General Manager

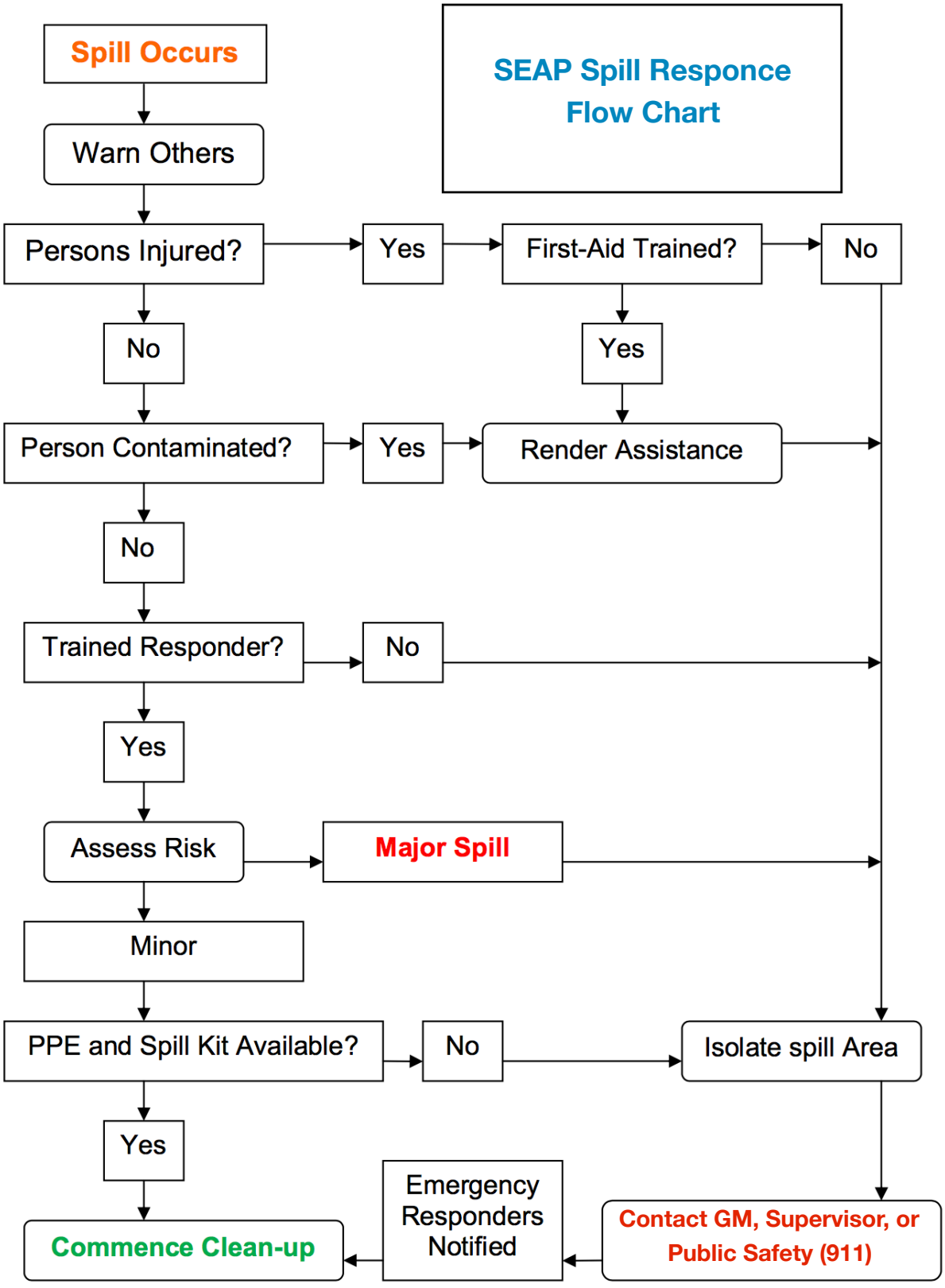
Poison Control	1-800-222-1222
Public Safety	911

Acknowledgements / Bibliography

This Special Edition Art Project document is based on the September 2011 Ball State University Spill Prevention and Response Plan. The BSU document and format is based on a Plan developed by the University of Alberta Office of Environmental Health and Safety.

The Spill Response Procedure summary in Appendix C was modified from a chart originated by the Department of Environmental Health & Safety at Stony Brook University.

Appendix A: SEAP Spill Response Flowchart



Appendix B: Chemical Spill Kits

Spills kits can be assembled from individual parts or suitable spill kits may be purchased from most chemical or safety supply companies. If you do chose to purchase a commercial kit, however, ensure that it contains all the necessary items as listed below. In addition, note that most commercial spill kits and the lists below are generic; it is important that spill kits be tailored to meet the specific spill control needs of each work area within the SEAP facility.

Small Chemical Spill Kit

A small chemical spill kit should be available in each lab or work area that uses chemicals. It can be used for immediate response to most spills, and to clean up small, low hazard spills that may occur and do not require specialized personnel protective equipment or spill control supplies. Although most small spill kit components are common items found within the working areas, there must be a consolidated spill kit for emergency use. The spill kit should be prominently labeled and located for ease of access in an emergency.

A. Personal Protective Equipment
- Chemical Splash Goggles
- Lab Coat or Coated Tyvek
- Heavy Nitrile or Neoprene Gloves

B. Spill Clean Up Equipment
- Plastic Dust Pan & Brush
- Heavy Plastic Bags (at least 3 mil thickness)
- Universal Spill Absorbent (1:1:1 mix of sodium carbonate: kitty litter: sand), Spill pillows, socks, or other suitable spill absorbent (enough to absorb a spill of the largest container in the work area)
- Other absorbents / neutralizers as required for the chemicals in the work area
- Drain covers (if floor, sink, or yard drains are in the vicinity)

The above may be conveniently stored in a labeled plastic container that can also be used for containment and disposal of the spill cleanup wastes. Other chemically resistant gloves or clothing may be necessary depending on the particular chemicals used or stored in the worksite, laboratory, or area.

Large / Facility Chemical Spill Kit

In general, it is recommended that there be a large spill kit for the SEAP facility.

A. Personal Protective Equipment
- Safety goggles (2)

- Nitrile Gloves
- Duct tape (roll)
- Alcohol swabs (box) or respirator disinfectant

B. Spill Cleanup Equipment

- Chemical absorbents (0.5 cubic foot)
- Plastic pail (5-gallon) with lid (2)
- Felt marking pen (2)
- Heavy Plastic Bags; at least 4 mil thickness (12)
- Plastic bucket with handle (1)
- Long handle sponge mop (1)
- Extra sponges (4)
- Plastic dust pan (1)
- Broom (1)
- Detergent (Alconox or equivalent - box)
- Citric Acid (500g)
- Sodium Bicarbonate (500g)
- Sodium Thiosulfate (500g)
- Spill Response Guideline

Appendix C: Spill Response Procedures

SEAP SPILL RESPONSE PROCEDURES

REMEMBER: DO FIRST AID FIRST, THEN ASSESS THE SPILL – Is the Spill Major or Minor?

Minor Spill - Definition

If SEAP workers have the training, protective equipment, and spill response supplies to control and cleanup the release, and the spill is:

- Less than 1 gallon spill of a low toxicity chemical
- Less than 1/2 quart (500 ml) of a highly hazardous chemical (carcinogen, reproductive hazard, or has NFPA/HMIS health or physical hazard rating of 3 or 4)
- Not a likely release to a waterway or drain, and:
- Without an injury, chemical or biological exposure, and no fire or explosion has occurred!

Minor Spill Response

1. Notify fellow workers in vicinity of spill.
2. Secure area, by restricting access and posting signs.
3. Remove any potential ignition sources, unplug nearby electrical equipment, and ventilate the area if safe and possible.
4. Gather and review safety information on spilled chemical. Review chemical's Material Safety Data Sheet (MSDS) for a hazard assessment and other pertinent information.
5. Refer to the SEAP Spill Prevention and Response Plan
6. Locate an appropriate Spill Kit, if available.
7. Don appropriate personal protective equipment (PPE) which usually includes chemical splash goggles, gloves, apron, coveralls, or lab coat. If high splash potential exists, also wear a face shield and protective clothing.
8. Confine and contain spill. Cover spill with appropriate absorbent material. Neutralize acid and base spills prior to cleanup. Protect any sink, floor, or yard drains.
9. Clean up spill using a scoop or other suitable item and place material in appropriate disposal container.
10. Decontaminate spill surface with mild detergent and water, as appropriate. Carefully remove PPE, place non- reusable items in disposal container and thoroughly wash hands.
11. Label the cleanup waste container. Contact the onsite General Manager or Supervisor to arrange for waste disposal.
12. Investigate cause of spill and review with onsite General Manager or Supervisor. Document spill, response, and follow-up with SEAP staff.
13. Replenish spill kit or supplies.

Major Spill - Definition

A chemical spill or release involving any of the following:

- Injury, fire, explosion, or exposure to hazardous chemical• More than 1 gallon spill of a low toxicity chemical
- Over 1/2 quart (500 ml) of a highly hazardous chemical
- Unknown chemical, product, or material
- Beyond training or capability of onsite staff

Major Spill Response

1. Notify and evacuate fellow workers to a safe area. Post Spill Hazard signage or isolate the area.

DO NOT ATTEMPT TO CLEAN A MAJOR SPILL ON YOUR OWN!

2. If spill poses a fire hazard – activate nearest fire alarm. Call Public Safety at 911 and give details of spill including specific location, chemical, quantity, and if anyone is injured.
3. In case of an injury or chemical contamination:
   a. Wear PPE and move victim from spill area.
   b. If first aid trained, administer first aid as appropriate. Assist person away from contaminated are for treatment. If possible, bring chemical label or MSDS.
   c. Locate nearest emergency eyewash and sink. Remove contaminated clothing and flush affected areas (eyes or skin) with copious amounts of water for 15minutes. Use soap on skin surfaces.
4. Onsite General Manager, Supervisor, or outside personnel will respond to the spill.
5. Workers knowledgeable about the spill should provide responders with all pertinent information and MSDS.
6. The responders or designee will inform workers when it is safe to re-enter spill area.
7. Investigate cause of spill. Complete Incident Report, response and follow-up with General Manager or Supervisor

For further information contact

SEAP General Manager