Hazardous Materials Emergency Response Plan

Prepared by

Department of Environmental Health and Safety

Drexel University

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1.0 Introduction

The Hazardous Materials Emergency Response Plan is designed to minimize hazards to human health and the resulting environment from any unplanned release of hazardous materials. This plan outlines the emergency procedures that shall be followed by personnel if hazardous materials are released. The Department of Environmental Health and Safety has designed the Hazardous Materials Emergency Response Plan in compliance with all Local, State, and Federal Regulations.

2.0 Training

The Department of Environmental Health and Safety will provide training to all University employees who handle hazardous materials in laboratories. Each employee shall receive training on proper handling of chemicals and emergency response procedures.

Initial training must be completed during the first month of employment (refresher training is provided annually thereafter). Emergency procedure training will be conducted as part of the annual laboratory safety training. Additional training sessions can be arranged by calling the Department of Environmental Health and Safety at (215) 895 – 5919 or by visiting http://www.drexel.edu/facilities/healthSafety/.

The Department of Environmental Health and Safety personnel and/or contractors who remove hazardous materials from laboratories shall have the OSHA 40 Hour HAZWOPER certification.

Emergency Response Contractor shall comply with the regulations in the HAZWOPER Standard (29 CFR 1910.120). Contractor employees shall be thoroughly informed in our Emergency Response Procedures. Contractor shall submit to the Department of Environmental Health and Safety training documentation to be kept on file.

The Department of Environmental Health and Safety shall document all emergency response training. Training records will be kept for at least three years from the date the employee last worked at the university.

3.0 Hazardous Material Spill Identification

The Department of Environmental Health and Safety shall separate hazardous material spills into two main categories:

- **Major Spills**
  - Chemical Spills Greater than 500 ml/gm –

    The Department of Environmental Health and Safety defines major spill as a large spill that is greater than 500gm or 500 ml or any amount of an acutely hazardous material.

An acutely hazardous material is any material that is imminently dangerous to life and health.

- Select Agent Spills

  The Department of Environmental Health and Safety defines select agent spill as any amount of regulated select agent released into the environment that could threaten the safety and health of the building occupants. Select agent spills are considered major spill events. Upon identifying a release laboratory occupant must immediately implement the major spill procedures.

- Hazardous Gas Release

  The Department of Environmental Health and Safety defines hazardous gas releases as any amount of hazardous gas released into the environment that could threaten the safety and health of the building occupants. Hazardous gas releases are considered major spills. Upon identifying a release laboratory occupant must immediately implement the major spill procedures.

- Mercury Releases

  The Department of Environmental Health and Safety considers mercury an extremely toxic and dangerous material. In effort to reduce possible exposure risks to personnel and students all mercury spills are regarded as major spills. Upon identifying a release immediately implement the major spill procedures.

- **Minor Spills**

  The Department of Environmental Health and Safety defines minor spill as a small spill that is less than 500 gm or 500 ml of non-acutely hazardous materials.

The Department of Environmental Health and Safety shall provide a list of some acutely hazardous chemicals. This list shall be referenced prior to any clean up.

All spills that occur in educational and/or vacant laboratories shall initially be identified as a major spill. The Department of Environmental Health and Safety shall assess the situation and determine the appropriate course of action.

4.0 Hazardous Material Spill Procedures for Minor Spills

In the event of a minor spill the following emergency procedures shall be implemented:

1. If injured or contaminated with a hazardous substance immediately implement personal decontamination procedures prior to reporting spill.
2. Laboratory personnel will be responsible for the containment and clean up of all **minor** spills.

3. Proper personal protection equipment shall be donned during the clean up of all **minor** spills. If laboratory personnel does not have the proper personal protective equipment then contact the Department of Environmental Health and Safety for assistance (refer to **Appendix I** for the contact number for the University Department of Health and Safety).
4. All non-disposable personal protective equipment shall be decontaminated and stored.
5. All disposable personal protective equipment and clean up materials shall be disposed of as hazardous waste.
6. If the material spilled is not covered under the **minor** spill definition (< 500 ml or 500 gm of non-acutely hazardous material) then laboratory personnel shall implement the **major spill procedures.**

Education and Vacant Laboratories:

All minor spills occurring in vacant laboratories, education/prep laboratories, or any other university area shall be considered a major spill. Therefore, anyone observing a minor spill in these areas shall implement the major spill procedures.

5.0 Hazardous Material Spill Procedures for Major Spills

The following procedure applies to:

- Laboratory personnel
- Education personnel
- Facilities Personnel
- Maintenance personnel
- Outside Contractor Personnel
- Environmental Services personnel
- Administrative personnel

In the event of a major spill in a university area, all laboratory, education, facilities, maintenance, outside contractor, administrative, and/or environmental services personnel will implement the following plan:

1. Notify persons in the immediate area that a spill has occurred.
2. Avoid breathing vapors, mists or dust of the spilled material.
3. Turn off all ignition sources, if possible.
4. If injured or contaminated with a hazardous substance immediately implement personal decontamination procedures (i.e. eyewash, safety shower, etc.) prior to reporting spill.
5. Evacuate room and close the door
6. Contact the following using any in house telephone:

Campus	Public Safety Dispatcher	On-Site Public Safety
Center City	215-895-2222	215-762-7111
Queen Lane	215-895-2222	215-991-8102
University City	215-895-2222	----------
PA Biotechnology Center	215-895-2222	----------

7. In order to asses the situation be prepared to provide the following information:

    - Name and call back number
    - The location of the spill (building and room number)
    - Type of material spilled
    - The amount of material spilled

8. Remain on or near the telephone until you have received instructions from the emergency operator or the Public Safety Dispatcher or the Department of Environmental Health and Safety.

Tenet Security

In event of a report of a major spill in a university area, the emergency operator will be responsible for implementing the following plan:

1. The following spill related information will be noted when any spill is reported (Refer to Appendix II for the Spill Reporting Worksheet):

    - Date and Time
    - Name of caller
    - Call back number
    - Is this a University Area? (If yes proceed with the rest of the questions. If no refer to the Hospital HMERP)
    - Location of the spill (building and room number)?
    - Type of spill
    - Amount of spill
    - Any injuries related to spill?
    - Has the spill been contained?

2. Immediately forward spill related information to the Drexel University 24-Hour Call Center once it has been gathered.

Public Safety Dispatcher

In event of a report of a major spill in a university area, the Public Safety Dispatcher will be responsible for implementing the following plan

1. The following spill related information will be noted when any spill is reported (Refer to Appendix II for the Spill Reporting Worksheet):

    - Date and Time
    - Name of caller
    - Call back number
    - Location of the spill (building and room number)?

- Type of spill
- Amount of spill
- Any injuries related to spill?
- Has the spill been contained?

2. Once the information has been gathered, the Dispatcher is responsible for directing a public safety officer (Only Queen Lane and University City Campuses) and a building engineer (University City only) to the location of the spill and notifying Emergency Rescue if there are any injuries.
3. The Dispatcher is responsible for contacting all individuals on the emergency group page list for the impacted campus and informing them of the situation.
4. The Dispatcher is responsible for contacting an individual on the Public Safety Emergency Contact List and informing them of the situation.
5. Once the severity of the spill has been determined, the Safety & Health representative will provide further instructions.
6. If deemed necessary, the Department of Environmental Health and Safety will advise the dispatcher to notify the Philadelphia Fire Department of the situation by calling 911. The Dispatcher must be prepared to provide the exact location of the spill (building name and street address), the dispatcher's name, and any additionally requested information.

Public Safety Officer/ Security (Center City, Queen Lane and University City Campuses)

In the event of a major spill the Security or Public Safety supervisor will be responsible for implementing the following plan in this exact order:

1. Evacuate the affected area or areas
2. Block off and secure the area or areas
3. Remain outside area of spill at a **safe distance**
4. Wait for instructions from the Department of Environmental Health and Safety.
5. Depending on the severity of the spill, additional Public Safety Officers may be directed to the scene to assist in crowd control and/or building evacuation.
6. Once the emergency is deemed under control, the Public Safety or Security Officer must contact the Dispatch Center or Emergency Operator and provide an update on the emergency.
7. The Public Safety or Security Supervisor is responsible for filing a complete and accurate incident report.

University City/Center City/Queen Lane Environmental Services/Housekeeping Supervisor

In the event of a major spill the Environmental Services supervisor will be responsible for implementing the following plan:

1. Notify all key personnel of the hazardous situation.
2. Keep all personnel from entering the hazardous area.
3. Wait for instructions from the Department of Environmental Health and Safety.

Center City Maintenance/ Queen Lane Maintenance, Facilities Management, and Building Engineer

In the event of a major spill the Maintenance supervisor will be responsible for implementing the following plan:

1. Notify all key personnel of the hazardous situation.
2. Keep all personnel from entering the hazardous area.
3. Wait for instructions from the Department of Environmental Health and Safety

University City Campus – Building Engineer

In the event of a major spill the Building Engineer will be responsible for implementing the following plan:

1. The building engineer will contact the Department of Environmental Health and Safety to discuss the situation in detail and determine the severity of the spill.
2. Notify all key personnel of the situation.
3. Keep all personnel from entering the hazardous area.
4. Remain outside area of spill at a **safe distance.**
5. Wait for instructions from the Department of Environmental Health and Safety.

Hahnemann University Hospital Administrator On Call and Safety Department

In the event of a major spill the Hahnemann University Hospital Administrator on call and the Safety Department shall wait for more information on the emergency situation. At the Administrator on call's discretion the Hospital Incident Command System may be initiated. **The Department of Environmental Health and Safety maintain control of clean up in non-hospital areas**.

The Department of Environmental Health and Safety

In the event of a major spill the Department of Environmental Health and Safety will be responsible for implementing the following plan:

1. Contact Public Safety Dispatcher immediately upon receiving notification of spill via text page.
2. Contact person-reporting spill.
3. **UNIVERSITY CITY AND QUEEN LANE CAMPUSES** - The Department of Environmental Health and Safety will contact the Public Safety Supervisor and/or Building Engineer on the scene to discuss the situation in detail and determine the severity of the spill.
4. **PA Biotechnology Center ONLY** – Contact the facilities representative. Inform the representative of the situation. Provide direction concerning response actions (i.e. notify security, evacuate immediate area, call 911 for HAZMAT).

5. Identify the character, exact source, and amount of released material. Identification can be performed by observation, chemical analysis, MSDS review, and/or chemical inventory.
6. Evaluate the situation. Use spill decision tree (Appendix IV) to assess the emergency.
7. **Center City Campus Only** - Provide information to the hospital safety and administrator on call via emergency operator. If the administrator on call determines that hospital operations will be or may be interrupted, than they may at their discretion implement the Hospital Incident Command System.
8. If spill needs immediate response direct the Public Safety Dispatcher to immediately contact the Philadelphia Fire Department. However, if spill does not need immediate response then contact emergency response contractor. Refer to Appendix V for emergency numbers.
9. Evacuation of areas potentially affected by the spill (e.g. adjacent room or the rooms below or above) will be at the discretion of the Department of Environmental Health and Safety. During evacuation of these areas, be sure that laboratory personnel shuts down all experiments and ignition sources.
10. Notify local authorities if other areas outside the building need to be evacuated or if spilled material has the potential to migrate off site into the public storm/wastewater system or surface water. Refer to Appendix V for outside emergency response contact numbers.
11. Obtain chemical inventory for area in question.
12. Obtain material safety data sheets on spilled material.
13. Move all information related to the spill to the established incident command center. Refer to Section, “Incident Command Center”.
14. If Philadelphia Fire Department is called, the Department of Environmental Health and Safety shall contact Community Relations.

If it is determined that a minor spill has occurred in a vacant laboratory or educational laboratory or any other area then steps 1 through 6 of the major spill plan shall be implemented.

If a minor spill occurs in a laboratory during normal hours of operation (9:00 am to 5:00 pm) then laboratory personnel or moderator will be responsible for containment and clean up of the spilled material(s).

If minor spill occurs any time before 9:00 am or after 5:00 pm then the Department of Environmental Health and Safety will respond for containment and clean up of the spilled material(s).

If spilled material is radioactive then the Department of Environmental Health and Safety will notify and inform Radiation Safety.

6.0 Spill Clean up Procedures

In the event of a spill, the Department of Environmental Health and Safety, laboratory personnel and hazardous material clean up contractors will implement the following clean up procedures:

1. Proper personnel protection equipment will be donned during clean up of all hazardous materials. Personnel protection equipment compatibility charts will be referenced prior to cleaning up any spilled material(s). If the laboratory personnel does not have the proper personal protective equipment then contact the Department of Environmental Health and Safety for assistance (refer to **Appendix I** for the contact number for the University Department of Health and Safety).
2. Contain spilled material(s) using absorbent pads and/or socks. Paper Towels will not be used for containment of spill nor will they be used for clean up.
3. Neutralize spilled material(s) using the appropriate neutralizing agent.
4. Clean up neutralized material using dustpan and/or plastic scoop.
5. Place neutralized material in hazardous waste bags. Dispose of as hazardous waste.
6. Wash area where spill has occurred with water several times making sure no residue was left behind. Dispose of any towels used as hazardous waste.
7. All emergency equipment shall be decontaminated and stored.
8. All non-disposable personal protective equipment shall be decontaminated and stored.
9. All disposable personal protective equipment and clean up materials shall be disposed of as hazardous waste.
10. Always use extreme caution when cleaning up hazardous substances.
11. A chronological report of the spill event must be drafted to document all event activities.

7.0 Incident Command Center

The Department of Environmental Health and Safety will establish an incident command center. The location will be in area outside the hot zone. The incident command center will be equipped with telecommunication equipment.

8.0 Command Structure

The Department of Environmental Health and Safety will designate an Emergency Coordinator as incident commander. This person will be responsible for coordinating all emergency response measures. The emergency coordinator will be thoroughly familiar with all aspects of the University's contingency plan and the facility layout. In addition, this person will be authorized to commit the resources needed to carry out the contingency plan. The designated emergency coordinator will be on call at all times. Refer to Appendix VI for the designated Emergency Coordinators.

9.0 Emergency Contact Numbers

The Principal Investigator will be responsible for posting emergency contact information on the laboratory entrance door. Contact information should include office phone, home phone and/or pager of emergency contact.

The Principal Investigator/Chemical Hygiene Officer shall post the University emergency phone numbers in the laboratory. Contact The Department of Environmental Health and Safety for emergency phone number list (Refer to Appendix I).

In addition to the laboratory posting, emergency phone numbers will be listed on all hallway and laboratory phones.

10.0 Emergency Alerting

The Department of Environmental Health and Safety will activate the fire alarm system to alert all building occupants that the building is being evacuated. On the Center City and Queen Lane campuses a "condition green", (all clear), notification shall be announced on the intercom system when the emergency situation is resolved. On the University City Campus the Public Safety Officer will call an "All Clear" notification to the Dispatch Center.

11.0 Evacuation Plan

The Department of Environmental Health and Safety will use the Philadelphia Fire Department fire evacuation plan. Refer to Appendix VII for the evacuation procedures.

12.0 Communication

Communication between the emergency coordinator and all parties involved will be by telephone or cell phone. Cell phones and Nextel radios will not be used in combustible or flammable atmospheres.

Community Relations will handle any communication with the news media, after meeting with emergency coordinator.

13.0 Emergency Medical Treatment

Anyone who may be injured or had an exposure to the hazardous material will receive medical treatment at the nearest emergency room or employee student health or occupational health office. Refer to Appendix I for contact numbers.

14.0 Emergency Response Equipment

The Department of Environmental Health and Safety personnel have minor spill emergency response bags containing PPE. In addition, spill clean up materials (i.e. absorbent pads, neutralizing agents, broom, shovel, and disposal bags) are located in each building in an area only accessible to Safety and Health personnel. The Department of Environmental Health and Safety will be responsible for maintaining all PPE and clean up materials. Refer to Appendix VIII for equipment inventory and locations.

15.0 Emergency Response Arrangements

The Department of Environmental Health and Safety has made arrangements with the following organizations:

- Philadelphia Police Department
- Philadelphia Fire Department

- Philadelphia Hazard Response Team
- PADEP (Norristown)
- Phillips Services Corporation
- Clean Harbor
- Associated Specialty Contracting
- Air Management Chemicals
- Air Management Asbestos

If it is determined that outside assistance is needed, the request will be coordinated through the Emergency Coordinator. Refer to Appendix V for the phone numbers.

16.0 Emergency Response Contractor

The Department of Environmental Health and Safety shall require emergency response contractors to comply with the HAZWOPER Standard 29 CFR 1910.120. In addition, the contractor shall comply with any local or state regulations on hazard response.

The Department of Environmental Health and Safety shall require emergency response contractors to provide copies of the following for the department's records:

- Names of all members of emergency response team
- Training certification of all members of the emergency response team
- Emergency Response equipment list
- Health and Safety Plan (HASP)

The Department of Environmental Health and Safety shall require all emergency response contractor personnel to sign-in prior to performing clean up. In addition, contractor shall provide a list of equipment that will be used during a clean up prior to performing the clean up.

17.0 Reporting Requirements

The Department of Environmental Health and Safety shall comply with all reporting requirements set forth by local, state and federal agencies. The EPA's "Title III List of Lists" shall be referenced to determine reportable quantities of the released hazardous material(s) (Refer to Appendix XIII for the List of Lists).

If it is determined that the University has had a release which could threaten human health or environment, outside the University then the National Response Center will be notified (Appendix V). In addition, a written report on the incident shall be submitted to the regional administrator with in 15 days after the incident. The report shall include the following:

- Name, address and phone number of operating officer.
- Name, address and phone number of University.
- Date, time and description of incident.
- Number of injures.

- Assessment of actual or potential hazards to human health or environment (if applicable).
- Estimated quantity and disposition of recovered materials that resulted from incident.

18.0 Practice Drills

The Department of Environmental Health and Safety shall perform practice drills to determine the effectiveness of the Hazardous Material Emergency Response Plan. These drills will enable the department personnel to become familiar with the plan's procedures.

Practices drills may include key staff from other departments, outside emergency response contractors, or may be the Department of Environmental Health and Safety staff only. The drills will be conducted semi-annually or after any major revision or changes to the plan.

Appendix I

Campus Emergency Contact Information

University City Campus - Emergency Contact Numbers

Department	Name	Office Number	Mobile Number	Pager Number
Public Safety		215-895-2222		
Emergency Room	HUP	215-662-3920		
Student Health	Drexel	215-895-5800		
Occupational Health	Worknet	215-487-5800		
Univ. Safety	Jon Chase	215-895-5891	215-669-6122	
Univ. Safety	Martin Bell	215-895-5892	215-778-4278	
Univ. Safety	Phil Leo	215-895-5909	215-768-1624	
Univ. Safety	Jeff Nemetz	215-895-5913	215-778-3039	
Univ. Safety	Jaime Barbaro	215-895-5896	215-768-1623	
Univ. Safety	Joseph Nihill	215-895-1624	215-249-0348	
Univ. Safety	Diana Dukes	215-895-5907	215-778-4279	
Radiation Safety	Kent Lambert	215-255-7860	215-651-2211	4-1260
Facilities		215-895-2808		215-308-1058
Maintenance		215-895-2808		215-308-1058
Environmental Services		215-895-2808	267-446-1086	215-265-0593

Center City Campus - Emergency Contact Numbers

Department	Name	Office Number	Mobile Number	Pager Number
Emergency Operator		215-762-7110		
Emergency Room	HUH	215-762-7963		
Student Health		215-762-8590		
Occupational Health	Worknet	215-762-8590		
Univ. Safety	Jon Chase	215-895-5891	215-669-6122	
Univ. Safety	Martin Bell	215-895-5892	215-778-4278	
Univ. Safety	Phil Leo	215-895-5909	215-768-1624	
Univ. Safety	Jeff Nemetz	215-895-5913	215-778-3039	
Univ. Safety	Jaime Barbaro	215-895-5896	215-768-1623	
Univ. Safety	Joseph Nihill	215-895-1624	215-249-0348	
Univ. Safety	Diana Dukes	215-895-5907	215-778-4279	
Hospital Facilities	Luis Gonzalez	215-762-3519	215-762-3000	
Hospital Safety	Steven Morrissey	215-762-6133	215-779-8901	
Radiation Safety	Kent Lambert	215-255-7860	215-651-2211	4-1260
Facilities	Patricia Lewis	215-762-6500	215-783-2672	4-1260
Facilities	Brian Lynch	215-255-7318	215-783-2557	4-1015
Facilities	John Mahoney	215-255-7320	215-668-7114	
Tenet Security		215-762-7110		
Tenet Maintenance		215-762-3000		
Environmental Services		215-762-4700		

Queen Lane Campus - Emergency Contact Numbers

Department	Name	Office Number	Mobile Number	Pager Number
Emergency Operator		215-895-2222		
Public Safety		215-895-2222		
Student Health		215-895-5800		
Occupational Health		215-762-8590		
Univ. Safety	Jon Chase	215-895-5891	215-669-6122	
Univ. Safety	Martin Bell	215-895-5892	215-778-4278	
Univ. Safety	Phil Leo	215-895-5909	215-768-1624	
Univ. Safety	Jen Nichols	215-895-5896	215-768-1623	
Univ. Safety	Jeff Nemetz	215-895-5913	215-778-3039	
Univ. Safety	Jaime Barbaro	215-895-5896	215-768-1623	
Univ. Safety	Joseph Nihill	215-895-1624	215-249-0348	
Univ. Safety	Diana Dukes	215-895-5907	215-778-4279	
Radiation Safety	Kent Lambert	215-255-7860	215-651-2211	4-1260
Facilities	Ray Stoffel	215-991-8484	215-651-1321	
Facilities	Brian Lynch	215-255-7318	215-783-2557	4-1015
Facilities	John Mahoney	215-255-7320	215-668-7114	
Security		215-991-8102		
Maintenance		215-991-8145		
Environmental Services		215-991-8145		

Pennsylvania Biotechnology Center – Emergency Contact Numbers

Department	Name	Office Number	Mobile Number	Pager Number
Security		215-489-2315		
24 Hour Call Center		215-895-2222		
Emergency Room				
Student Health				
Occupational Health				
Univ. Safety	Jon Chase	215-895-5891	215-669-6122	
Univ. Safety	Martin Bell	215-895-5892	215-778-4278	
Univ. Safety	Phil Leo	215-895-5909	215-768-1624	
Univ. Safety	Jeff Nemetz	215-895-5913	215-778-3039	
Univ. Safety	Jaime Barbaro	215-895-5896	215-768-1623	
Univ. Safety	Joseph Nihill	215-895-1624	215-249-0348	
Univ. Safety	Diana Dukes	215-895-5907	215-778-4279	
Radiation Safety	Kent Lambert	215-255-7860	215-651-2211	4-1260
Facilities	Gerald Litschi	215-489-4947	484-767-5779	
Maintenance		215-489-4904	215-778-1184	
Environmental Services		215-489-4904	215-778-1184	

Appendix II

Spill Reporting Worksheet

Spill Reporting Worksheet

1. Date of Incident _____
2. Time of Incident _____
3. Name of person reporting incident: _____
   _____
4. Callback number of person reporting incident: _____
   _____
5. Location of Spilled material (building/room #): _____
   _____
   _____
6. Material spilled: _____
   _____
   _____
   _____
7. Amount Spilled: _____
   _____
8. Any Injuries related to the spill _____
   _____
   _____
   _____
   _____
9. Has the spill been contained _____
   _____
   _____
   _____
   _____
10. Notes: _____
    _____
    _____
    _____
    _____
    _____
    _____

Appendix III

Emergency Operator/Public Safety Group Page List

Center City Campus - Group Page List

Listed below is the emergency contact number to be used by the emergency operator.

Representative should only be called if an emergency arises. When calling the representative on the list, follow established procedures outlined in the Emergency Response Section of this manual.

Department	Name	Nextel/Mobile Number	Nextel Private ID	Office Number	PagerNumber
Public Safety		----------	168*21*8398	215-895-2222	----------

Queen Lane Campus – Group Page List

Public Safety Dispatcher – 24 Hour Call Center

Listed below are the emergency contact numbers to be used by the Public Safety Dispatcher. Individuals with cell phones are to be contacted simultaneously via text message. Individuals without cell phones are to be contacted via pager or associated phone numbers. Public Safety dispatcher must contact all the individuals on this list. Confirmation of text message or pager must be obtained via follow up hard line call.

Representatives should only be called if an emergency arises. When calling individuals on the list, follow established procedures outlined in the Emergency Response Section of this manual.

Department	Name	Cell Number	Nextel Pr ID	Office Number	Pager/Mobile Number
Univ. Safety	Jon Chase	215-669-6122	----------	215-895-5891	----------
Univ. Safety	Martin Bell	215-778-4278	----------	215-895-5892	----------
Univ. Safety	Phil Leo	215-768-1624	----------	215-895-5909	----------
Univ. Safety	Jeff Nemetz	215-778-3039	----------	215-895-5913	----------
Univ. Safety	Jaime Barbaro	215-768-1623	----------	215-895-5896	----------
Univ. Safety	Joseph Nihill	215-249-0348	----------	215-895-1624	----------
Facilities Mgn.	Ray Stoffel	215-651-1321	168*21*7897	215-991-8484	----------
Security	Front Desk	----------	----------	215-991-8102	----------
Building Engineer	Lead Engineer	215-783-6089	----------	215-991-8825	215-783-5082
Environmental Services	----------	----------	----------	215-991-8145	14351

University City Campus – Group Page List

Listed below are the emergency contact numbers to be used by the Public Safety Dispatcher. Individuals with cell phones are to be contacted in simultaneously via text message. Individuals without cell phones are to be contacted via pager or associated phone numbers. Public Safety dispatcher must contact all the individuals on this list. Confirmation of text message or pager must be obtained via follow up hard line call.

Representatives should only be called if an emergency arises. When calling individuals on the list, follow established procedures outlined in the Emergency Response Section of this manual.

Under no circumstances are phone numbers to be given out over the phone. Inform the individual calling that you will contact the person they wish to speak to and will have them return the call. Be sure to obtain the caller's number.

Department	Name	Cell Number	Nextel Pr ID	Office Number	Pager/Mobile Number
Univ. Safety	Jon Chase	215-669-6122	----------	215-895-5891	----------
Univ. Safety	Martin Bell	215-778-4278	----------	215-895-5892	----------
Univ. Safety	Phil Leo	215-768-1624	----------	215-895-5909	----------
Univ. Safety	Jeff Nemetz	215-778-3039	----------	215-895-5913	----------
Univ. Safety	Jaime Barbaro	215-768-1623	----------	215-895-5896	----------
Univ. Safety	Joseph Nihill	215-249-0348	----------	215-895-1624	----------
Facilities Mgn.	**Off Hours only!**	----------	----------	----------	**215-308-1058**
Facilities Mgn.	Mike Smith (Business Hours)	215-768-1433	168*131*64	215-895-1504	215-895-1700
Engineer	Ad Van Hees (Business Hours)	215-778-6846	168*131*40	215-895-1964	215-895-1700
Maintenance	Jack Murtaugh (Business Hours)	215-768-1521	168*21*7540	215-895-6901	215-895-1700
Housekeeping	**Off Hours only!**	----------	----------	----------	
Housekeeping	Daryl Carlton	267-446-1086	168*131*16	215-895-6169	215-895-1700
Dorms	Charles Peck	215-783-1058	168*131*34	215-895-2930	215-895-1700

Pennsylvania Biotechnology Center – Group Page List

Listed below are the emergency contact numbers to be used by the Public Safety Dispatcher. Individuals with cell phones are to be contacted simultaneously via text message. Individuals without cell phones are to be contacted via pager or associated phone numbers. Public Safety dispatcher must contact all the individuals on this list. Confirmation of text message or pager must be obtained via follow up hard line call.

Representatives should only be called if an emergency arises. When calling individuals on the list, follow established procedures outlined in the Emergency Response Section of this manual.

Under no circumstances are phone numbers to be given out over the phone. Inform the individual calling that you will contact the person they wish to speak to and will have them return the call. Be sure to obtain the caller's number.

Department	Name	Nextel Number	Nextel Pr ID	Office Number	Pager/Mobile Number
Univ. Safety	Jon Chase	215-669-6122	----------	215-895-5891	----------
Univ. Safety	Martin Bell	215-778-4278	----------	215-895-5892	----------
Univ. Safety	Phil Leo	215-768-1624	----------	215-895-5909	----------
Univ. Safety	Jeff Nemetz	215-778-3039	----------	215-895-5913	----------
Univ. Safety	Jaime Barbaro	215-768-1623	----------	215-895-5896	----------
Univ. Safety	Joseph Nihill	215-249-0348	----------	215-895-1624	----------

Appendix IV

Emergency Response Decision Worksheet

Emergency Response Decision Worksheet

1. Name of person reporting incident: _____
2. Callback number of person reporting incident: _____
3. Location of Spilled material (building/room #): _____
   _____
   (**If spill occurs within or adjacent to Hospital Operations, notify the on-call administrator via security**).
4. Material spilled: _____
   _____
   _____
5. Amount Spilled: _____
   _____
6. Time and Date of incident: _____
7. Is this a major or minor spill? _____
8. Is the material acutely hazardous? _____
   (**If yes and spill is too large to handle contact the contracted emergency response vendor).**
9. State of spilled material (solid, liquid, or gas): _____
10. Is the spilled material radioactive? _____
    (If yes, immediately contact radiation safety).
11. Has the spill entered the drainage system? _____
    (If yes, immediately contact the POTW, National Response Center, Philadelphia Hazmat and PADEP).
12. Has the spill entered the outside environment? _____
    (If yes, contact the National Response Center, Philadelphia Hazmat and any other agency that would respond to media (soil, air, water) affected).
13. Does spill need immediate response? _____
    (If yes, contact Philadelphia Hazmat).
14. Has anyone been injured? _____
15. Has anyone been exposed to the material? _____

Appendix V

Outside Emergency Response Contact Numbers

Outside Emergency Response Contact Numbers

Company/Agency	Telephone Number
Phillips Services Corporation	215-822-2676
Clean Harbor	1-856-589-5000
Associated Specialty Contracting	1-610-637-0084
Philadelphia Fire/Police/Hazmat	911
PADEP Norristown	1-484-250-5900
EPA Region Administrator	215-814-5000
National Emergency Response Center	1-800-424-8802
Philadelphia Water Department	215-685-6300
Air Management Chemical	215-685-7572
Air Management Asbestos	215-685-7576 (Normal hours of operation)
Air Management Asbestos	215-686-4514 (Holidays/Nights/Weekends)

Appendix VI

Emergency Coordinator List

Emergency Coordinator (EC)

EC Priority	Name	Office Number	Nextel Number	Private ID
Primary	Jon Chase	215-895-5891	215-669-6122	----------
Secondary	Martin Bell	215-895-5892	215-778-4278	----------
Tertiary	Phil Leo	215-895-5909	215-768-1624	----------

Appendix VII

Evacuation Plan

Evacuation Plan

The fire alarms will be activated by the Department of Environmental Health & Safety if it is determined that the building needs to be evacuated. All personnel shall follow the Philadelphia Fire Department fire evacuation plan when alarms are activated.

1. When the fire alarms sounds, LEAVE AT ONCE. Close doors behind you. Proceed into the fire exit and remain there until you are given instructions either by the Philadelphia Fire Department or the Safety and Health Department. Fire exits are safe areas of refuge since they are enclosed and the doors and walls are fire-rated to keep smoke and heat from entering the stairway.
2. DO NOT USE ELEVATORS. They will stop if power fails, causing occupants to become trapped.
3. Feel the door that leads from your office to the corridor before opening it. If it is hot or smoke is seeping in, do not open. If you become trapped in your office or laboratory and cannot reach the fire exit, keep the door closed and seal off any cracks. Use the telephone in your office to call the Emergency Operator (Phone # -80) or the Fire Department 911, and give the name and location of the building, the floor you are on, and the office number.
4. If the door feels cool, open it cautiously. Be braced to slam it shut if the corridor is full of smoke or fumes or if you feel heat pressure against the door. If the corridor is clear, proceed to the fire exits.
5. DISABLED PERSON (S): A responsible person or persons who work in the same area, as the disabled should be assigned to assist them in the event of fire. These person(s) should be taken into the fire exit and remain on the landing in the fire exit until assisted by the Philadelphia Fire Department.
6. If caught in smoke or heat, stay low where the air is better. Take short breaths through you nose until you reach the fire exit.
7. AFTER NORMAL WORKING HOURS, WEEKENDS OR HOLIDAYS: All occupants should immediately exit through the fire doors and proceed directly down and out to the street level. Do not use the elevators!

Appendix VIII

Emergency Response Equipment Inventory List

Emergency Response Equipment Inventory

Part	Quantity
Mercury Spill Clean-Up Kit	2
Acid Neutralizer - 6 Shakers	2
Caustic Neutralizer - 6 Shakers	2
Solvent Absorbent - 6 Shakers	2
Formalin Neutralizer - 6 Shakers	2
Shovel	2
Broom	2
Squeegee	2
Absorbant Socks approx. 20-40'	2
Absorbant towels/pads (box of 25)	2
Caution tape	2
Free Standing Caution Sign	2
Ph paper Large (range from 0-13)	2
Goggles	4
Face shield	2
Bib Apron (Package of 25)	1
Saranex Shoe Covers (25 pairs)	2
Tyvech Saronex Suits	12
Nitrile Gloves (1 box of 100 Size Large)	2
Heavey Duty Nitrile Gloves (2 pair Size 10)	2
Latex Gloves (1 box of 100 Size Large)	2
Full Face Respirators	2
Organic Vapors/Acid Gases Cartridge with HEPA filter (2 packages)	4
Formaldehyde/Organic Vapor Cartidge with HEPA filter (2 packages)	4
Hazardous Material Poly Bags- Large (2 boxes of 24)	2
Hazardous Material Poly Bags- Small (2 boxes of 24)	2
Drager Soft-Sided accuro Pump Kit	1
Mercury Drager Detector Tube (1 package)	1
Acid Compounds in Air Drager Detector Tube (1 package)	1
Natural Gas Drager Detector Tube (1 package)	1
Carbon Monoxide Drager Detector Tube (1 package)	1
Basic Compounds in Air Drager Detector Tube (1 package)	1
Hydrocarbons Drager Detector Tube (1 package)	1
Formaldehyde Drager Detector Tube (1 package)	1
PID Four Gas Monitor (H2S, O2, LEL, Organics)	1
Flash Light	4
Tools	
Note: The Safety Office is located 400 N. 31st Street.	
Note: Each person in safety department will have a PPE bag.	

University City Campus – Stratton Hall – Temporary Accumulation Area

Fire Protection Equipment

1. Fire Alarm – located throughout the entire building – notifies and evacuates building occupants – notifies the Fire Department.
2. Fire Extinguisher – located in room 145 and throughout the building – ABC rating – extinguishes small fires.
3. Automatic Halon System – located in the temporary accumulation area – fire suppression system.

Communication

1. Cell Phones – all Health and Safety personnel involved in hazardous waste oprations carries a Cell Phone – contact fire department and police.
2. Land Line Telephone – Located in room 145 directly adjacent to the storage facility – contact Health and Safety personnel, fire department and police.
3. Fire Alarm – located throughout the entire building – notifies and evacuates building occupants – notifies the Fire Department.

Spill Control Equipment

1. Shovel – located in room 145 directly adjacent to the storage facility and in the emergency response vehicles.
2. Broom – located in room 145 directly adjacent to the storage facility and the emergency response vehicles.
3. Squeegee – located in room 145 directly adjacent to the storage facility and the emergency response vehicles..
4. Absorbent pads – located in room 145 directly adjacent to the storage facility and the emergency response vehicles. – size is 1x1.5 feet – 30 pads for containment.
5. Absorbent booms – located in room 145 directly adjacent to the storage facility and the emergency response vehicles. – four feet in length – 15 booms for containment.
6. Oil Absorbent – located in room 145 directly adjacent to the storage facility and the emergency response vehicles. – 5 gallons.
7. Neutralizing agents – located in room 145 directly adjacent to the storage area and the emergency response vehicles – powder neutralizes solvents, acids, and bases – over 30 gallons.
8. Personal Protection Equipment – located in the emergency response vehicles – respirator, gloves, goggles, and saranex suites with booties and hood.

Decontamination Equipment

1. Deluge Shower – located in room 145 directly adjacent to the storage facility – decontaminates entire body of hazardous waste operation personnel.
2. Emergency Eyewash – located in room 145 directly adjacent to the storage facility – decontaminates eyes of hazardous waste operation personnel.

3. Water Supply – located in the building – utilized with buckets to decontaminate equipment.

Center City Campus – Bobst Building – Temporary Accumulation Area

Fire Protection Equipment

1. Fire Alarm – located throughout the entire building – notifies and evacuates building occupants – notifies the Fire Department.
2. Fire Extinguisher – located in storage area and throughout the building – ABC rating – extinguishes small fires.
3. Automatic Sprinkler System – located in the temporary accumulation area – fire suppression system.

Communication

1. Nextel Telephones – all Health and Safety personnel involved in hazardous waste oprations carries a Nextel telephone with two way capabilities – contact fire department and police.
2. Land Line Telephone – located in room directly adjacent to the storage facility – contact Health and Safety personnel, fire department and police.
3. Fire Alarm – located throughout the entire building – notifies and evacuates building occupants – notifies the Fire Department.

Spill Control Equipment

1. Shovel – located in the storage room and the emergency response vehicles.
2. Broom – located in the storage room and the emergency response vehicles.
3. Squeegee – located in the storage room and the emergency response vehicles.
4. Absorbent pads – located in the storage room and the emergency response vehicles. – size is 1x1.5 feet – 30 pads for containment.
5. Absorbent booms – located in the storage room and the emergency response vehicles. – four feet in length – 15 booms for containment.
6. Oil Absorbent – located in the storage room the emergency response vehicles. – 5 gallons.
7. Neutralizing agents – located in the storage room and the emergency response vehicles – powder neutralizes solvents, acids, and bases – over 30 gallons.
8. Personal Protection Equipment – located in the emergency response vehicles – respirator, gloves, goggles, and saranex suites with booties and hood.

Decontamination Equipment

1. No decontamination equipment present.

East Falls Campus – Queen Lane – Temporary Accumulation Area

Fire Protection Equipment

1. Fire Alarm – located throughout the entire building – notifies and evacuates building occupants – notifies the Fire Department.
2. Fire Extinguisher – located outside G92 and throughout the building – ABC rating – extinguishes small fires.
3. Automatic Sprinkler System – located in the temporary accumulation area – fire suppression system.

Communication

1. Cell Phones – all Health and Safety personnel involved in hazardous waste oprations carries a Cell Phone with two way capabilities – contact fire department and police.
2. Land Line Telephone – located directly adjacent to the storage facility – contact Health and Safety personnel, fire department and police.
3. Fire Alarm – located throughout the entire building – notifies and evacuates building occupants – notifies the Fire Department.

Spill Control Equipment

1. Shovel – located in room G92 directly adjacent to the storage facility and in the emergency response vehicles.
2. Broom – located in room G92 directly adjacent to the storage facility and the emergency response vehicles.
3. Squeegee – located in room G92 directly adjacent to the storage facility and the emergency response vehicles..
4. Absorbent pads – located in room G92 directly adjacent to the storage facility and the emergency response vehicles. – size is 1x1.5 feet – 30 pads for containment.
5. Absorbent booms – located in room G92 directly adjacent to the storage facility and the emergency response vehicles. – four feet in length – 15 booms for containment.
6. Oil Absorbent – located in room G92 directly adjacent to the storage facility and the emergency response vehicles. – 5 gallons.
7. Neutralizing agents – located in room G92 directly adjacent to the storage area and the emergency response vehicles – powder neutralizes solvents, acids, and bases – over 30 gallons.
8. Personal Protection Equipment – located in the emergency response vehicles – respirator, gloves, goggles, and saranex suites with booties and hood.

Decontamination Equipment

1. No decontamination equipment present.

Appendix IX

Quick Reference Guides

Hazardous Material Spill Identification

The Department of Environmental Health and Safety separates hazardous material spills into two main categories:

- **Major Spills**

  - Chemical Spills Greater than 500 ml/gm –

    The Department of Environmental Health and Safety defines major spill as a large spill that is greater than 500 gm or 500 ml or any amount of an acutely hazardous material. An acutely hazardous material is any material that is imminently dangerous to life and health.

  - Select Agent Release

    The Department of Environmental Health and Safety defines select agent releases as any amount of regulated select agent released into the environment that could threaten the safety and health of the building occupants. Select agent releases are considered major spill events. Upon identifying a release laboratory occupants must immediately implement the major spill procedures.

  - Hazardous Gas Release

    The Department of Environmental Health and Safety defines hazardous gas releases as any amount of hazardous gas released into the environment that could threaten the safety and health of the building occupants. Hazardous gas releases are considered major spill events. Upon identifying a release laboratory occupants must immediately implement the major spill procedures.

  - Mercury Releases

  The Department of Environmental Health and Safety considers mercury an extremely toxic and dangerous material. In effort to reduce possible exposure risks to personnel and students all mercury spills are regarded as major spills.

- **Minor Spills**

  The Department of Environmental Health and Safety defines minor spill as a small spill that is less than 500 gm or 500 ml of non-acutely hazardous materials.

The Department of Environmental Health and Safety shall provide a list of some acutely hazardous chemicals. This list shall be referenced prior to any clean up.

All spills that occur in educational and vacant laboratories shall initially be identified as a major spill. The Department of Environmental Health and Safety shall assess the situation and determine the appropriate course of action.

Hazardous Material Spill Procedures for Minor Spills

In the event of a minor spill the following emergency procedures shall be implemented:

1. If injured or contaminated with hazardous substances immediately proceed with personal decontamination procedures.
2. Laboratory personnel will be responsible for the containment and clean up of all **minor** spills.
3. Proper personal protection equipment shall be donned during the clean up of all **minor** spills. If the laboratory occupants do not have the proper personal protective equipment then contact the Department of Environmental Health and Safety for assistance at 215-895-5892 or 215-778-4278 or 215-895-5919 or Public Safety at 215-895-2822 to contact a representative from the Department of Environmental Health and Safety.
4. All non-disposable personal protective equipment shall be decontaminated and stored.
5. All disposable personal protective equipment and clean up materials shall be disposed of as hazardous waste.
6. If the material spilled is not covered under the **minor** spill definition (< 500 ml or 500 gm of non-acutely hazardous material) then laboratory personnel shall implement the **major spill procedures.**

Education and Vacant Laboratories**:**

All **minor** spills occurring in vacant laboratories, education/prep laboratories, or any other university area shall be considered a major spill. Therefore, anyone observing a minor spill in these areas shall implement the major spill procedures.

Hazardous Material Spill Procedures for Major Spills

The following procedure applies to:

- Laboratory personnel
- Education personnel
- Maintenance personnel
- Outside Contractor Personnel
- Environmental Services personnel
- Administrative personnel

In the event of a major spill in a university area, all laboratory, education, maintenance, outside contractor, administrative, and/or environmental services personnel will implement the following plan:

1. Notify persons in the immediate area that a spill has occurred.
2. Avoid breathing vapors, mists or dust of the spilled material.
3. Turn off all ignition sources, if possible.
4. If injured or contaminated with hazardous chemicals immediately proceed with personal decontamination procedures.
5. Evacuate room and close the door.
6. Contact the following using any in house telephone:

Campus	**Public Safety Dispatcher**	**Emergency Operator**
Center City	215-895-2222	215-762-7111
Queen Lane	215-895-2222	215-895-8102
University City	215-895-2222	----------
Pa Biotechnology Center	215-895-2222	----------

7. In order to asses the situation be prepared to provide the following information:

- Name and call back number
- The location of the spill (building and room number)
- Type of material spilled
- The amount of material that spilled

8. Remain on or near the telephone until you have received instructions from the emergency operator or Public Safety or Security or the Department of Environmental Health and Safety.

Personal Decontamination Procedures

Please be advised that these procedures are general decontamination procedures. These procedures might not be appropriate for certain types of hazardous materials. In effort to ensure proper decontamination consult the Material Safety Data Sheet prior to conducting any experiments.

If injured or contaminated with a hazardous substance these procedures will be implemented **immediately** prior to cleaning up or reporting spill.

- For spills contacting the of skin, follow these procedures:

1. Immediately flush with flowing water for no less than 15 minutes (i.e. sink or safety shower).
2. If there is no visible burn, wash with warm water and soap, removing any jewelry to facilitate clearing of any residual material.
3. Check the material safety data sheet to see if any delayed effects should be expected. If the MSDS is not available contact the Department of Environmental Health and Safety immediately at 215-895-5892 or 215-778-4278 or 215-895-5919 or go to www.hazard.com.
4. Seek medical attention for even minor chemical burns.
5. Do not use creams, lotions, or salves.

- For spills on clothing, follow these procedures:

1. Do not attempt to wipe the clothes.
2. Quickly remove all contaminated clothing, shoes, and jewelry while using the safety shower.
3. Seconds count, so do not waste time because of modesty
4. Take care not to spread the chemical on the skin or, especially, in the eyes.
5. Use caution when removing pullover shirts or sweaters to prevent contamination of the eyes; it may be better to cut the garments off.
6. Immediately flood the affected body area with warm water for no less than 15 minutes. Resume if pain returns.
7. Get medical attention as soon as possible.
8. Discard contaminated clothes as hazardous waste or have them laundered separately from other clothing.

- For splashes into the eye, take these steps:

1. Using the eyewash immediately flush for at least 15 minutes.
2. Hold the eyelids away from the eyeball, and move the eye up and down and sideways to wash thoroughly behind the eyelids.
3. Get medical attention immediately. Follow first aid by prompt treatment by a member of a medical staff or an ophthalmologist who is acquainted with chemical injuries.

HUH Center City Campus - Emergency Operator Emergency Response Procedures

HUH Center City Campus - Emergency Operator

In event of a report of a major spill in a university area, the emergency operator will be responsible for implementing the following plan:

1. The following spill related information will be noted when any spill is reported (Refer to Appendix II for the Spill Reporting Worksheet):

    - Date and time of call
    - Name of caller
    - Call back number
    - Is this a University Area? (If yes proceed with the rest of the questions. If no refer to the Hospital HMERP)
    - Location of the spill (building and room number)?
    - Type of spill
    - Amount of spill
    - Any injuries related to the spill
    - Has the spill been contained

2. Immediately forward spill related information to the Drexel University 24-Hour Call Center once it has been gathered.

Queen Lane Campus - Public Safety Dispatcher
Hazardous Material Emergency Response Procedures

Drexel Public Safety Dispatcher

In event of a report of a major spill in a university area, the Public Safety Dispatcher will be responsible for implementing the following plan

1. The following spill related information will be noted on the spill reporting worksheet when any spill is reported:

    - Date and time of call
    - Name of caller
    - Call back number
    - Location of the spill (building and room number)?
    - Type of spill
    - Amount of spill
    - Any injuries related to the spill
    - Has the spill been contained

2. Once the information has been gathered, the Dispatcher is responsible for directing the Public Safety Supervisor and Engineer to the location of the spill and notifying Emergency Rescue if there are any injuries.
3. The Dispatcher is responsible for contacting all individuals on the Safety & Health Group Page Call List and informing them of the situation.
4. The Dispatcher is responsible for contacting an individual on the Public Safety Emergency Contact List and informing them of the situation.
5. Once the severity of the spill has been determined, the Safety & Health Representative will provide further instructions.
6. If deemed necessary, the University Environmental Health & Safety Department will advise the dispatcher to notify the Philadelphia Fire Department of the situation by calling 911. The Dispatcher must be prepared to provide the exact location of the spill (building name and street address), the dispatcher's name, and any additionally requested information.

University City Campus - Public Safety Dispatcher Hazardous Material Emergency Response Procedures

Drexel Public Safety Dispatcher

In event of a report of a major spill in a university area, the Public Safety Dispatcher will be responsible for implementing the following plan

1. The following spill related information will be noted on the spill reporting worksheet when any spill is reported:

    - Date and time of call
    - Name of caller
    - Call back number
    - Location of the spill (building and room number)?
    - Type of spill
    - Amount of spill
    - Any injuries related to the spill
    - Has the spill been contained

2. Once the information has been gathered, the Dispatcher is responsible for directing the Public Safety Supervisor and Engineer to the location of the spill and notifying Emergency Rescue if there are any injuries.
3. The Dispatcher is responsible for contacting all individuals on the Safety & Health Group Page Call List and informing them of the situation.
4. The Dispatcher is responsible for contacting an individual on the Public Safety Emergency Contact List and informing them of the situation.
5. Once the severity of the spill has been determined, the Safety & Health Representative will provide further instructions.
6. If deemed necessary, the University Safety and Health Department will advise the dispatcher to notify the Philadelphia Fire Department of the situation by calling 911. The Dispatcher must be prepared to provide the exact location of the spill (building name and street address), the dispatcher's name, and any additionally requested information.

Pennsylvania Biotechnology Center - Public Safety Dispatcher Hazardous Material Emergency Response Procedures

Drexel Public Safety Dispatcher

In event of a report of a major spill in a university area, the Public Safety Dispatcher will be responsible for implementing the following plan

1. The following spill related information will be noted on the spill reporting worksheet when any spill is reported:

    - Date and time of call
    - Name of caller
    - Call back number
    - Location of the spill (building and room number)?
    - Type of spill
    - Amount of spill
    - Any injuries related to the spill
    - Has the spill been contained

2. Once the information is gathered the Dispatcher is responsible for contacting all individuals on the Safety & Health Group Page Call List and informing them of the situation.
3. The Dispatcher is responsible for contacting an individual on the Public Safety Emergency Contact List and informing them of the situation.
4. Once the severity of the spill has been determined, the Safety & Health Representative will provide further instructions.

Public Safety Officer/Security Hazardous Material Emergency Response Procedures

Public Safety Officer/ Security (Center City, Queen Lane and University City)

In the event of a major spill the Public Safety officer/security will be responsible for implementing the following plan in this exact order:

1. Evacuate the affected area or areas
2. Block off and secure the area or areas
3. Remain outside area of spill at a **safe distance**
4. Wait for instructions from the Department of Environmental Health and Safety.
5. Depending on the severity of the spill, additional Public Safety Officers/Security Officers may be directed to the scene to assist in crowd control and/or building evacuation.
6. Once the emergency is deemed under control, the Public Safety Officer/Security Officer must contact the Dispatch Center or Emergency Operator and provide an update on the emergency.
7. The Public Safety or Security Supervisor is responsible for filing a complete and accurate incident report.

Environmental Services/ Housekeeping Supervisor Hazardous Material Emergency Response Procedures

In the event of a major spill the Environmental Services supervisor will be responsible for implementing the following plan:

1. Notify all Environmental Services/Housekeeping personnel of the hazardous situation.
2. Keep all personnel from entering the hazardous area.
3. Wait for instruction from the Department of Environmental Health and Safety.

Center City and Queen Lane Campuses Facilities Management/Maintenance Supervisor/Building Engineer Hazardous Material Emergency Response Procedures

In the event of a major spill the Maintenance supervisor will be responsible for implementing the following plan:

1. Notify all personnel of the hazardous situation.
2. Keep all personnel from entering the hazardous area.
3. Wait for instruction from the Department of Environmental Health and Safety.

University City Building Engineer Hazardous Material Response Procedures

In the event of a major spill the Building Engineer will be responsible for implementing the following plan:

1. The building engineer will contact the Department of Environmental Health and Safety to discuss the situation in detail and determine the severity of the spill.
2. Notify all key personnel of the situation.
3. Keep all personnel from entering the hazardous area.
4. Remain outside area of spill at a **safe distance.**
5. Wait for instructions from the Department of Environmental Health and Safety.

Department of Environmental Health and Safety Hazardous Material Emergency Response Procedures

In the event of a major spill the Department of Environmental Health and Safety will be responsible for implementing the following plan:

1. Contact Public Safety Dispatcher immediately upon receiving notification of spill via text page.
2. Contact person-reporting spill.
3. **UNIVERSITY CITY AND QUEEN LANE CAMPUSES ONLY -** The Department of Environmental Health and Safety will contact the Public Safety supervisor and/or the Building Engineer on the scene to discuss the situation in detail and determine the severity of the spill.
4. **PA Biotechnology Center ONLY –** Contact the facilities representative. Inform the representative of the situation. Provide direction concerning response actions (i.e. notify security, evacuate immediate area, call 911 for HAZMAT).
5. Identify the character, source, and amount of released material. Identification can be performed by observation, chemical analysis, MSDS review, and/or chemical inventory.
6. Evaluate the situation. Use spill decision tree to assess the emergency.
7. **ONLY REFERS TO CENTER CITY -** Provide information to the hospital safety and administrator on call via emergency operator. If the administrator on call determines that hospital operations will be or may be interrupted, than they may at their discretion implement the Hospital Incident Command System.
8. If spill needs immediate response direct the Public Safety Dispatcher to immediately contact Philadelphia Fire Department. However, if spill does not need immediate response then contact emergency response contractor or contain and remediate.
9. Evacuation of areas potentially affected by the spill (e.g. adjacent rooms or rooms below or above) will be at the discretion of the Department of Environmental Health and Safety. During evacuation of these areas be sure laboratory personnel shuts down all experiments and ignition sources.
10. Notify local authorities if other areas outside the building need to be evacuated or if spilled material has the potential to migrate off site into the public storm/wastewater system or surface water.
11. Obtain chemical inventory for area in question.
12. Obtain material safety data sheets on spilled material.
13. Move all information related to the spill to the established incident command center.
14. If Philadelphia Fire Department is called, the Department of Environmental Health and Safety shall contact Community Relations.

If it is determined that a minor spill has occurred in a vacant laboratory or educational laboratory or any other area then steps 1 through 6 of the major spill plan shall be implemented.

If minor spill occurs in an occupied laboratory during normal hours of operation (9:00 am to 5:00 pm) then laboratory personnel or moderator will be responsible for containment and clean up of the spilled material(s).

If minor spill occurs any time before 9:00 am or after 5:00 pm then Department of Environmental Health and Safety shall contact the secured hazardous material clean up contractor for containment and clean up of the spilled material(s).

If spilled material is radioactive then Department of Environmental Health and Safety will notify and inform Radiation Safety.

Spill Clean up Procedures

In the event of a spill, the Department of Environmental Health and Safety, laboratory personnel and hazardous material remediation contractors will implement the following clean up procedures:

1. Proper personnel protection equipment will be donned during clean up of all hazardous materials. Personnel protection equipment compatibility charts will be referenced prior to cleaning up any spilled material(s). If the laboratory personnel does not have the proper personal protective equipment then contact the Department of Environmental Health and Safety for assistance at 215-895-5892 or 215-778-4278 or Public Safety at 215-895-2822 to contact a representative from the Department of Environmental Health and Safety.
2. Contain spilled material(s) using absorbent pads and/or socks. Paper Towels will not be used for containment of spill nor will they be used for clean up.
3. Neutralize spilled material(s) using the appropriate neutralizing agent.
4. Clean up neutralized material using dustpan and/or plastic scoop.
5. Place neutralized material in hazardous waste bags. Dispose of as hazardous waste.
6. Wash area where spill has occurred with distilled water several times making sure no residue was left behind. Dispose of any towels used as hazardous waste.
7. All emergency equipment shall be decontaminated and stored.
8. All non-disposable personal protective equipment shall be decontaminated and stored.
9. All disposable personal protective equipment and clean up materials shall be disposed of as hazardous waste.
10. Always use extreme caution when cleaning up hazardous substances.
11. A chronological report of the spill event must be drafted to document all event actions.

Appendix X

U & P List – Toxic and Acutely Hazardous List

P LIST

Hazardous Waste No.	TOXIC CHEMICALS Substance
P023	Acetaldehyde, chloro
P002	Acetamide, N-(aminothioxomethyl)
P057	Acetamide, 2-fluoro
P058	Acetic acid, fluoro-, sodium salt
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P203	Aldicarb sulfone.
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide (R,T)
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate
P099	Argentate(1-), bis(cyano-C)-, potassium
P010	Arsenic acid H3 As04
P012	Arsenic Oxide As2 O3
P011	Arsenic oxide As= OS
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl
P036	Arsonous dichloride, phenyl
P054	Aziridine
P067	Aziridine, 2-methyl
P013	Barium cyanide
P024	Benzenamine, 4-chloro
P077	Benzenamine, 4-nitro
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)
P046	Benzeneethanamine, alpha,alpha-dimethyl
P014	Benzenethiol
P127	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P188	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-tdmethylpyrrolo[2,3

P001	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-l-phenylbutyl)-, & salts, when present at concentrations
P028	Benzyl chloride
P015	Beryllium powder
P017	Bromoacetone
P018	Brocine
P045	2-Butanone, 3,3-dimethyl-l-(methylthio)-,
P021	Calcium cyanide
P021	Calcium cyanide Ca(CN):
P189	Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester
P191	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]- 5-methyl-lH- pyrazol-3-yl ester.
P192	Carbamic acid, dimethyl-, 3-methyl-l- (1-methylethyl)-1H- pyrazol-5-yl ester.
P190	Carbamic acid, methyl-, 3-methylphenyl ester.
P127	Carbofuran.
P022	Carbon disulfde
P095	Carbonic dichloride
P189	Carbosulfan.
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanide
P029	Copper cyanide Cu(CN)
P202	m-Cumenyl methylcarbamate.
P030	Cyanides (soluble cyanide salts), not otherwise specified
P031	Cyanogen
P033	Cyanogen chloride
P033	Cyanogen chloride (CN)CI
P034	2-Cyclohexyl-4,6-dinitrophenol
P016	Dichloromethyl ether
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P041	Diethyl-p-nitrophenyl phosphate
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropylfluorophosphate (DFP)
P004	1,4,5,8-Dimethanonaphthalene, 1,2,3.4,10,10-hexa- chloro-1,4,4a,5,8,8a; hexahydro-. (talpha,4alpha,4abeta,5alpha,8alpha,8abeta)
PO60	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (ialpha,4a]pha,4abeta,5beta,8beta.8abeta)
P037	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-la,2,2a,3,6,ea,7,7a-octahydro-

	(laalpha,2beta,2aalpha.3beta,6beta,6aalpha,7beta, 7aalpha)
P051	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-ia,2,2a,3,6,6a,7,7a-octahydro-(laalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta, 7aalphay, & metabolites
P044	Dimethoate
P046	alpha, alpha-Dimethylphenethylamine
P191	Dimetilan.
P047	4,6-Dinitro-o-cresol, & salts
P048	2.4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramide, octamethyl
P711	Diphosphoric acid, tetraethyl ester
P039	Disulfoton
P049	Dithiobiuret
P785	1,3-Dithiolane-2carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)- carbonyl]oxime.
P050	Endosulfan
PO88	Endothall
P051	Endrin
P051	Endrin, & metabolites
P042	Epinephrine
P031	Ethanedinitrile
P194	Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester.
P066	Ethanimidothioic acid,
P701	Ethyl cyanide
P054	Ethyleneimine
P097	Famphur
P056	Fluorine
P057	Fluoroacetamide
P058	Fluoroacetic acid, sodium salt
P798	Formetanate hydrochloride.
P197	Formparanate.
P065	Fulminic acid, mercury(2+) salt (R,T)
P059	Heptachlor
P062	Hexaethyltetraphosphate
P116	Hydrazinecarbothioamide
P068	Hydrazine, methyl
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P096	Hydrogen phosphide
P060	Isodrin
P192	Isolan.
P202	3-Isopropylphenyl N-methylcarbamate.

P007	3(2H)-Isoxazolone, 5-(aminomethyl)
P196	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P196	Manganese dimethyldithiocarbamate.
P092	Mercury, (acetato-0)phenyl
P065	Mercury fulminate (R,T)
P082	Methanamine, N-methyl-N-nitroso
P064	Methane, isocyanato
P016	Methane, oxybis[chloro
P712	Methane, tetranitro- (R)
P118	Methanethiol, trichloro
P798	Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride.
P197	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]
P050	6,9-Methano-2.4,3-benzodioxathiepin, 6,7,8,9,10,10
P059	4,7-Methano-lH-indene, 1,4,5,6,7,8,8-heptachloro
P199	Melhiocarb.
P066	Methomyl
P068	Methyl hydrazine
P064	Methyl isocyanate
P069	2-Methyllactonitrile
P071	Methyl parathion
P790	Metolcarb.
P128	Mexacarbate.
P072	alpha-Naphthylthiourea
P073	Nickel carbonyl
P073	Nickel carbonyl Ni(CO)4, (T-4)
P074	Nickel cyanide
P074	Nickel cynaide Ni(CN):
P075	Nicotine, & salts
P076	Nitric oxide
P077	p-Nitroaniline
P078	Nitrogen dioxide
P076	Nitrogen oxide NO
P078	Nitrogen oxide NO,
P081	Nitroglycerine (R)
P082	N-Nitrosodimethylamine
P084	N-Nitrosomethylvinylamine
P085	Octamethylpyrophosphoramide
P087	Osmium oxide 0$0,, (T-4)
P087	Osmium tetroxide
P088	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid

P794	Oxamyl.
P089	Parathion
P034	Phenol, 2-cyclohexyl-4,6-dinitro
P048	Phenol, 2,4-dinitro
P047	Phenol, 2-methyl-4,6-dinitro-, 8 salts
P020	Phenol, 2-(1-methylpropyl)-4,6-dinitro
P009	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P128	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester).
P199	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P202	Phenol, 3-(1-methylethyl)-, methyl carbamate.
P201	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate.
P092	Phenylmercury acetate
P093	Phenylthiourea
P094	Phorate
P095	Phosgene
P096	Phosphine
P041	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	Phosphorodithioic acid, 0,0-diethyl
P094	Phosphorodithioic acid, 0,0-diethyl
P044	Phosphorodithioic acid, 0,0-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P043	Phosphorofluondic acid, bis(1-methylethyl) ester
P089	Phosphorothioic acid, 0,0-diethyl O-(4-nitrophenyl) ester
P040	Phosphorothioic acid, 0,0-diethyl O-pyrazinyl ester
P097	Phosphorothioic acid,O-[4-[(dimethylamino)sulfonyl]phenyl] 0,0.dimethyl ester
P071	Phosphorothioic acid, 0,0.-dimethyl 0.(4-nitrophenyl) ester
P204	Physostigmine.
P188	Physostigmine salicylate.
Pilo	Plumbane, tetraethyl
P098	Potassium cyanide
P098	Potassium cyanide K(CN)
P099	Potassium silver cyanide
P201	Promecarb
P070	Propanal, 2-methyl-2-(methylthio)-,O-[(methylamino)carbonyl]oxime
P203	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime.
P101	Propanenitrile
P027	Propanenitrile, 3-chloro
P069	Propanenitrile, 2-hydroxy-2-methyl
P081	1,2,3-Propanetdol, trinitrate (R)
P017	2-Propanone,1-bromo
P102	Propargyl alcohol
P003	2-Propenal

P005	2-Propen-l-of
P0671,	2-Propylenimine
P102	2-Propyn-l-of
P008	4-Pyridinamine
P075	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, 8 salts
P204	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-thmethyl-,methylcarbamate (ester), (3aS-cis)-.
P114	Selenious acid, dilhallium(1+) salt
P104	Silver cyanide
P104	Silver cyanide Ag(CN)
P105	Sodium azide
P106	Sodium cyanide
P106	Sodium cyanide Na(CN)
P108	Strychnidin-10-one, & salts
P018	Strychnidin-10-one, 2,3-dimethoxy
P108	Strychnine, & salts
P115	Sulfuric acid, dithallium(1+) salt
P109	Tetraethyldithiopyrophosphate
P110	Tetraethyl lead
P111	Tetraethyl pyrophosphate
P112	Tetranilromethane (R)
P062	Tetraphosphoric acid, hexaethyl ester
P113	Thallic oxide
P713	Thallium oxide Tlz O,
P114	Thallium(I) selenite
P115	Thallium(I) sulfate
P109	Thiodiphosphoric acid, tetraethyl ester
P045	Thiofanox
P049	Thioimidodicarbonic diamide [(H= N)C(S)1= NH
P014	Thiophenol
P116	Thiosemicarbazide
P026	Thiourea, (2-chlorophenyl)
P072	Thiourea, 1-naphthalenyl
P093	Thiourea, phenyl
P185	Tirpate.
P123	Toxaphene
P118	Trichloromethanethiol
P119	Vanadic acid, ammonium salt
P120	Vanadium oxide V_ OS
P120	Vanadium pentoxide
P084	Vinylamine, N-methyl-N-nitroso

P103	Selenourea
P001	Warfarin, & salts, when present at concentrations greater than 0.3
P205	Zinc, bis(dimethylcarbamodithioalo-S,S')-,
P121	Zinc cyanide
P121	Zinc cyanide Zn(CN)=
P122	Zinc phosphide Zn3 P2, when present at concentrations greater than 10% (R,T)
P205	Ziram
U007	Acrylamide
U135	Hydrogen sulfide
U135	Hydrogen sulfide H2S
U151	Mercury
U188	Phenol
See F027	2,4,5-T
U207	1,2,4,5-Tetrachlorobenzene
U208	1,1,1,2-Tetrachloroethane
U209	1,1,2,2-Tetrachloroethane
U210	Tetrachloroethylene
See F027	2,3,4,6-Tetrachlorophenol

Appendix XI

Confirmation of Training Form

Confirmation of Training Form

I, _____, certify that I have received training on the policies and procedures of the University Department Safety and Health concerning emergency response. In addition, I have read and understood the Hazardous Material Emergency Response Plan set forth by the University Safety and Health and will follow all requirements that are mandated in this protocol.

_____	_____
Please Print Name	Date
_____	_____
Signature	Title
_____	_____
Department/Company Name	Telephone Number

Appendix XII

Facility Locations

Facility Locations

University City Campus

Drexel	:	3141 Chestnut Street Philadelphia, Pa 19104

Center City Campus Address

New College Building	:	245 North 15th Street Philadelphia, Pa 19102
Bobst Building	:	245 North 15th Street Philadelphia, PA 19102

Queen Lane Campus Address

Queen Lane	:	2900 Queen Lane Philadelphia, Pa 19129

Delaware Valley College Campus Address

Drexel Institute	:	3805 Old Easton Road 700 East Butler Ave. Doylestown, PA 18902

Appendix XIII

Title III List of Lists