

B-1 Emergency Response Procedures

I. Scope

The procedures outlined in this document pertain to all employees at NCI-Frederick. For employees at other locations, please refer to the Managers Handbook for Off-Site Employees.

II. Purpose

Emergency response procedures provide for the protection of personnel at NCI-Frederick, preservation of property, and minimization of business interruption. Emergencies are defined as an occurrence of any event (such as medical emergencies, fire, biological spills, chemical spills, radiation exposures, etc.) that places employees at risk.

III. Responsibilities

A. Supervisor

1. Thoroughly understands emergency procedures applicable to their area of supervision.
2. Assures that all employees have completed emergency training and drills that pertain to the area in which the employee will be working.
3. Notifies EHS or Protective Services as described in Section IV of this procedure.
4. Evacuate employees (as appropriate) in the event of an emergency.
5. Accounts for all employees and reports results to the ranking member of the incident management team.
6. Prepares a description of the event and proposed corrective action in a memorandum to EHS.

B. Employee

1. Attends appropriate training sessions as required by the area and job tasks performed.
2. Reports all emergencies immediately to his/her supervisor or EHS.
3. Remains within the boundaries of the safe assembly area during an evacuation until the "all clear" has been sounded and it is safe to re-enter the work area.

C. Environment, Health and Safety Program (EHS)

1. Responds to reported emergencies during working hours. During non-working hours, is informed of incidents requiring response through the Protective Services Dispatch Desk.
2. Determines whether the area is safe prior to re-entry by building occupants.
3. Coordinates and provides training and information to employees on emergency response procedures.
4. Requests supervisor of program originating the emergency to prepare written documentation according to III.A.6.

D. Protective Services

1. Dispatch Desk notifies incident management team personnel, external emergency responders (as needed), and coordinates response.
2. Protective Services Officers respond to emergencies to assist, investigate, and document the incident.

E. Occupational Health Services (OHS)

1. Available to assist with medical emergencies during working hours (8:15am to 5:00pm) on location and after hours with the on call nurse practitioner who can be reached by Security. Utilize telephonic computer alert (Red Sky) to assist the emergency location with assistance as needed.2. Assist with other emergencies according to established protocols.

2. Perform first aid and medical treatment according to scope of practice and established protocols.

IV. Emergency Preparedness Committee

- A. An Emergency Preparedness Committee (EPC) shall coordinate emergency preparedness measures. The Director, NCI is designated as in command of the EPC. The EPC is comprised of representatives from Protective Services, Environment, Health and Safety (EHS), Facilities Maintenance and Engineering, Occupational Health Services, and NCI Management.
- B. The EPC will manage emergency situations by initiating a series of notifications and procedural actions that will assemble the necessary resources and provide directions for remedial action. Participants from other areas and/or agencies will be added to the EPC as appropriate to the contingency being managed. The EPC will maintain rosters of personnel to contact for direction and assistance in conjunction with specific emergencies.

V. Evacuation Procedures

- A. In advance, each employee shall:
 1. Be familiar with the building evacuation plan.
 2. Recognize the sound of the evacuation alarm.
 3. Know at least two ways out of the building from your regular work space.
- B. When you hear the evacuation alarm or are told to evacuate the building:
 1. Remain calm.
 2. Immediately cease all operations that may become hazardous.
 3. Leave quickly, without running.

4. During normal business hours the Supervisor in each area is responsible for ensuring that all occupants evacuate the area. In addition, every employee should check that all others in the area are leaving as instructed.
5. During other than normal business hours, quickly check nearby restrooms, copier rooms, closets, etc. for personnel as you exit.
6. Accompany and assist handicapped personnel, visitors, and any coworkers who appear to need direction or assistance.
7. Shut all doors behind you as you go. Closed doors can slow the spread of fire, smoke, and water.
8. Proceed as quickly as possible, in an orderly manner. Do not push or shove. Hold handrails when you are walking on stairs.
9. Once outside, move away from the building to the designated assembly area.
10. Contact your supervisor or EHS if you are not familiar with the assembly area locations(s) for your building.

VI. Spills (Biological/Chemical/Radiological)

A. Spill Cleanup Procedures

1. Biological Spill Procedure

- a. In the event of a spill involving a biological agent where an aerosol was potentially generated, lab personnel should immediately leave the area, close the doors/entrances, and insure that others do not enter. If possible during departure, spill containment materials (e.g., spill pillows, spill snakes) should be used to confine the contamination. Personnel should immediately notify the lab supervisor and the Biological Safety Officer (x1451). Unless dictated by an emergency, such as a known exposure of personnel, do not attempt spill clean-up until after discussion with the Biological Safety Officer. Decontamination may be performed by EHS personnel or by lab personnel under the direction of the EHS as per the following protocol:

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- i. Leave the area and post a warning sign to ensure no one enters the area. These signs are available from the Biological Safety Office or barrier tape is available from Protective Services. Notify the lab supervisor, lab director, facility manager, and Biological Safety Officer.
- ii. Allow a minimum of 30 minutes for aerosols to dissipate (based upon a 8-12 air exchange rate per hour) and don heavy-weight, puncture resistant gloves over latex gloves, tyvek jumpsuit, water resistant shoe covers, and a HEPA filter respirator (note, the individual must be qualified by OHS and trained by EHS to wear a respirator).
- iii. Use absorbent materials (e.g., paper towels, bath towels, etc.) to blot the spill. Apply these carefully to avoid creating aerosols.
- iv. Spray or pour 1:10 dilution of bleach or other appropriate EPA registered tuberculocidal disinfectants above the spill and allow the disinfectant to penetrate the spill. Continue to spray or pour disinfectant until the absorbent materials and perimeter are saturated. Let this stand for the manufacturer's recommended contact time or a minimum of 30 minutes to allow microbial inactivation.
- v. Place the absorbent material into a pan or biohazard bag for autoclaving and swab the entire spill area with an EPA approved disinfectant. Continue until all laboratory surfaces have been disinfected and cleaned. If the spill area includes any sharp material (broken glass, plastic, etc.) use tweezers, dust pan, etc., to eliminate the handling of these sharps.
- vi. Autoclave the contaminated clean-up materials. The heavy-weight gloves may be decontaminated with approved disinfectants and reused if holes or other damage are not present.

- b. In the event of personnel exposure the following steps should be taken immediately upon exposure:
 - i. Remove contaminated garments to reduce skin contamination.
 - ii. Wash exposed skin with povidone-iodine lotion followed by soap and water. This may be best accomplished by showering.
 - iii. If an eye exposure is suspected, flush eyes with copious volumes of water from an eyewash station for 15 minutes.
 - iv. In case of parenteral exposure, vigorously cleanse the wound with a povidone-iodine soaked scrub kit or soap and water for 15 minutes.
 - v. Exposed personnel must report immediately after emergency action is completed to Occupational Health Services (OHS).
- c. A report on spill assistance shall be completed by EHS for every known spill.

NOTE: A spill occurring inside a functioning laminar flow hood or other containment device, although undesirable, does not ordinarily constitute a reportable spill. Any procedure or protocol which seems to routinely produce conditions that result in biosafety cabinet contamination should be reported to the lab supervisor so that the procedure can be evaluated and modified to reduce exposure risks.

2. Chemical Spills

- a. Many chemical spills in laboratories, because of the small volume of the spill and the technical background of lab staff, may be safely cleaned by the lab staff. However, in the event of a spill or release that poses an occupational hazards, employees shall immediately evacuate the hazard area. The spill volume, toxicity, and volatility will affect the size of the hazard area. For relatively low-hazard spills such as oils or most aqueous solutions, preventing direct contact

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with the spilled material provides sufficient protection. For spills involving other hazardous chemicals, employees shall evacuate the laboratory or room where the spill occurred, closing the door behind them. Spills or releases of poisonous or corrosive gases (chlorine, phosgene) or poison-inhalation hazards (hydrogen fluoride) require extreme caution, and may necessitate evacuation of the building.

- b. EHS staff have the training and equipment to respond to chemical spills at the NCI-Frederick and to supervise clean-up activities. As needed, EHS will coordinate response to any spills beyond response capacity, e.g. spills requiring level A PPE or spills > 55 gallons. An employee who discovers a spill should immediately contact EHS unless the employee is absolutely certain that they are capable of cleaning up the spill safely. If an employee cleans up a spill, he or she shall contact EHS as soon as possible for proper disposal of spill debris.
- c. In the event of a spill or release which has the potential to expose people to hazardous chemicals, do the following:
 - i. Evacuate all personnel to an area removed from effects of the spill, close all entrances to the spill area, and prevent others from entering the affected area. If possible without creating undue risk:
 - (a) Shut down equipment that, if allowed to run, may create a hazard or cause damage if unattended.
 - (b) For flammable spills, eliminate potential sources of ignition such as lights, motors, Bunsen burners, etc.
 - (c) For liquids, prevent spills from reaching drains by using absorbents or other available means.

- ii. Provide emergency first aid for employees who are injured or contaminated.
 - (a) Notify Occupational Health Services if injured employees require medical attention.
 - (b) Direct contaminated personnel to the nearest eyewash or emergency shower.
 - (c) Flush contaminated skin with water for at least 15 minutes while removing any contaminated clothing.
 - (d) If the eyes are affected, hold the eyelids open while flushing for at least 15 minutes.
- iii. Notify EHS that a spill has occurred (after hours, notify Protective Services), and provide the following information:
 - (a) Location of the spill.
 - (b) The chemical name(s) and amount spilled, if known.
 - (c) Injuries or special circumstances.
- iv. EHS personnel will respond to the spill and perform the following actions upon arrival at the scene:
 - (a) Ascertain that personnel have been evacuated from the hazard area, that entry to the area has been restricted, and that all serious injuries have received medical attention.
 - (b) As necessary, notify the Fort Detrick Fire Department and/or federal, state, and local authorities in accordance with the contingency plan or the Spill Prevention Control and Countermeasures (SPCC) Plan.
 - (c) Supervise or conduct the spill clean up, properly dispose of contaminated debris, and

inform personnel when it is safe to re-enter the area.

- (d) Refer potentially affected employees for medical consultation.
- (e) Investigate the cause of the incident, document findings and response actions, actions to prevent recurrence and submit follow-up reports as necessary.

3. Radiological Spills

- a. The following general procedures shall be followed when radioactive material is spilled:
 - i. Notify OHS personnel for those in need of medical attention.
 - ii. Evacuate all personnel to an area removed from effects of the spill and close all entrances to the spill area.
 - iii. If the release of airborne radioactive material is suspected, close all doors. Turn off biosafety cabinets that do not exhaust to the outside.
 - iv. Call the Program Principal Investigator and the Radiation Safety Officer.
 - v. Keep all persons known or suspected of being contaminated confined to one area to prevent the further spread of contamination. Do not allow other persons to enter this area.
- b. The Radiation Safety Officer will immediately dispatch personnel and necessary equipment to the scene of the incident and shall perform the following upon arrival at the scene:
 - i. Ascertain that all personnel have been evacuated from the hazard area, ensure that entry into the area has been restricted, and ensure that all serious

injuries have received medical attention.

- ii. Monitor all personnel involved in the incident to determine the extent of the contamination. The Radiation Safety Officer will initiate necessary personnel decontamination procedures. The Principal Investigator or other knowledgeable person may monitor immediately if deemed essential and shall report the results of this monitoring to the Radiation Safety Officer.
 - iii. Evacuate the hazard area if deemed appropriate.
 - iv. Supervise the decontamination of the contaminated area.
 - v. Investigate the cause of the incident and report to the Radiation Safety Committee on the cause as well as actions taken to prevent such an incident in the future.
- c. The Radiation Safety Officer will prepare and produce any reports required by 10 CFR 20, NRC license conditions, and/or NCI-FREDERICK operational protocols.

VII. Fire

- A. The first person discovering a fire will immediately take the following steps:
- 1. Notify all personnel in the area by shouting "FIRE!".
 - 2. Cease all operations that may become hazardous, and proceed to the nearest exit as quickly as possible.
 - 3. Notify the Fort Detrick Fire and Emergency Services by alarm and telephone.
 - a. Alarm - Go to the nearest Fire alarm pull station and activate the alarm by following the instructions on the cover.
 - b. Telephone - Dial ext. 911. Give the building number, room number, nature of the fire, and your name.
 - 4. Attempt to extinguish the fire only if properly trained, and totally

familiar with the type of fire and method of extinguishment.

5. Assemble at the predetermined safe assembly area. Contact your supervisor or Safety (x1451) if you are not familiar with the assembly area location(s) for your building.

B. All persons except those whose duties require them to be present shall stay away from the scene of the fire.

C. Building Personnel

1. In the event of a fire, the Area Supervisor will be in charge until the arrival of the Fort Detrick Fire Department.
2. The Area Supervisor will give information to the Fort Detrick Fire Department pertaining to any unusual or particular hazard existing in the building.
3. In the absence of the Area Supervisor, a member of EHS may assume those duties relative to biological, chemical, and radiological safety.

D. Reporting of Fires

1. The Chief of Fire and Emergency Services Division, Fort Detrick, in cooperation with the Area Supervisor and EHS will investigate all fires and submit a copy of the final report to the NCI Project Office.
2. EHS and the immediate supervisor responsible for the areas where the fire occurred shall investigate the circumstance leading up to and causing the fire. EHS and the Supervisor will prepare a detailed narrative report of the incident, including time, place, equipment, personnel, circumstances causing the fire damage, and proposed corrective actions to prevent a recurrence.

VIII. Medical Emergencies

A. If a staff member or visitor is seriously ill or injured:

1. Notify Emergency Medical Services by dialing 9-1-1. Provide the emergency dispatcher with your name, exact location, and condition of the ill or injured person and nature of emergency or injury.

2. Unless it is a life-threatening situation and you are qualified to respond, do not attempt to render first aid yourself before emergency personnel arrive.
3. Do not attempt to move a person who has fallen and/or appears to be in pain.
4. If the staff member or visitor has a minor injury or illness, direct them to report to the OHS clinic at building 426.
5. .Avoid unnecessary conversation with, or about, the ill or injured person. You might increase the person's distress or fears, and thereby contribute to medical shock. Limit your communication to quiet reassurances.
6. Avoid contact with blood or body fluids.

B. First Aid in Medical Emergencies After Office Hours:

In the event you see or are informed/made aware of a medical emergency, stay calm, dial 9-1-1 and follow the instructions on the preceding pages.

IX. Power Outage

A. NCI-FREDERICK buildings have emergency generators, or battery powered lights, which provide emergency lighting. FME will respond to the outage in accordance with their Electrical Outage Response Plan.

B. If a power outage occurs:

1. Remain calm.

Note: In buildings with emergency generators, there may be a delay of up to one minute between the power failure and the transfer of power from the emergency generator. During this time, locations without natural light sources will be in total darkness.

2. If telephones are working, notify the FME trouble desk at x1068, or Protective Services at x1091 after hours. If phones are not working, report to Protective Services in Building 426.
3. If you are in an unlighted area, proceed cautiously to an area that

has emergency lights.

4. Evacuate lab buildings and proceed to the designated assembly areas for your fire zone. Contact your supervisor or Safety (x1451) if you are not familiar with the assembly area location(s) for your building.
5. Elevators - If the elevator car stops between floors, or doors do not open, use the emergency telephone in the elevator car to call for help. Rescue will be performed by FME personnel and/or the Fire Department.

X. Water Outage

- A. The water outage shall be reported. A scheduled outage will be reported to all involved prior to the event through a memorandum from FME. Any unscheduled outage shall be reported to the FME trouble desk at x1068 and EHS at x1451.
- B. In the event of a total water outage all hazardous work in the outage area shall be suspended.
- C. Any work requiring the availability of emergency showers and eyewashes shall be suspended until the water supply is restored. It may be possible for the employee to perform non-hazardous work, such as paperwork, during the water outage.
- D. Responsibilities
 1. Supervisors

Require employees to comply with safety procedures during a water outage.
 2. Employees
 - a. Safely terminate all work in which the possibility of a skin or eye injury could occur which would necessitate the use of an emergency shower/eyewash.
 - b. Any work that requires the use of process water for heating or cooling, etc. shall also be terminated.

3. Facilities Maintenance and Engineering
 - a. Report all scheduled outages to concerned and affected personnel.
 - b. Remediate the cause of unplanned outages under its control.
4. Environment, Health and Safety Program
 - a. Ensure that supervisors are aware of policies and procedures that need to be followed during a water outage.
 - b. Respond to any emergencies that may occur during this outage.

XI. Flooding and Water Damage

- A. Serious water damage can occur from a number of causes: burst pipes, clogged drains, broken skylights or windows, malfunctioning equipment, or accidents. All water damage should be reported to Protective Services.
- B. If a water leak occurs, or water damage and/or standing water is visible:
 1. Notify FME at x1068 during working hours or Protective Services at x1091 after hours. Advise the exact location, source, and severity of the leak. Indicate any building damage.
 2. Notify the supervisor of the extent and location of the water problem, if possible.
 3. Do not touch metal surfaces if there are electrical outlets, switches or appliances near the leak. If there is any possible danger of electrocution, evacuate the area.
 4. If you know the source of the water and are confident of your ability to stop it (i.e., turn off the water, unclog the drain, etc.), do so cautiously.
 5. Be prepared to assist as directed in protecting materials that are in jeopardy. Take only essential steps to avoid or reduce immediate water damage: cover equipment and storage cabinets with plastic

sheeting; carefully move small or light weight materials out of the flood area.

XII. Ventilation Outage

- A. A ventilation outage shall be reported. A scheduled outage will be reported to all involved prior to the event through a memorandum from FME. Any unscheduled outage shall be reported to the FME trouble desk at x1068 and EHS at x1451.
- B. All hazardous work in the outage area shall be suspended. All chemicals inside a chemical fume hood shall be covered, and if possible, placed in an alternate storage site. Solvents can go into a flammable storage cabinet. Bulk chemicals can go back on the shelves once covered. Biological samples shall be covered, and if possible, placed into a refrigerator or freezer.
- C. When occupancy of an area is deemed unsafe by EHS, all employees must evacuate the area.
- D. Responsibilities
 1. Supervisors

Ensure that subordinate employees comply with procedures in a ventilation outage.
 2. Employees

Safely terminate the work currently in progress, and comply with procedures.
 3. Facilities Maintenance and Engineering
 - a. Report scheduled outages to concerned and affected personnel.
 - b. Remediate the cause of any unplanned outages under its control.
 4. Environment, Health and Safety Program
 - a. Ensure that supervisors are aware of policies and procedures that need to be followed during a ventilation

outage.

- b. Respond to any emergencies that may occur during a ventilation outage.
- c. Determine whether evacuation is necessary.

XIII. Oxygen Deficiency

A. Responsibilities

1. Supervisors in monitored areas will ensure that personnel leave the area immediately when the oxygen alarm sounds and ensure that FME or EHS is notified whenever oxygen sensor readings remain at or below 19.5 percent.
2. Employees are responsible for:
 - a. Immediately leaving the area when an oxygen deficiency alarm sounds.
 - b. Notifying EHS of the alarm situation.
 - c. Keeping unauthorized persons from entering the area.
 - d. Staying out of the area until re-entry is authorized.
3. FME is responsible for:
 - a. Scheduling and performing preventative maintenance and calibration on the oxygen deficiency alarm systems in accordance with manufacturers instructions.
 - b. Performing unscheduled maintenance when needed.
 - c. Procurement and installation of oxygen deficiency alarm systems.
 - d. Design and installation of ventilation systems to prevent an oxygen deficiency during routine operations, such as filling

freezers.

4. Protective Services Branch, EHS is responsible for:
 - a. Monitoring alarm conditions after working hours, on weekends, and holidays, and responding to alarm situations occurring during these times with a portable oxygen monitor to determine the oxygen concentration at the site of the alarm.
 - b. Notifying appropriate FME and EHS personnel as needed.
 - c. Preventing unauthorized entry into suspected oxygen deficient atmospheres.
5. EHS is responsible for:
 - a. Responding to alarm situations with a portable oxygen monitor to determine the oxygen concentration at the site of the alarm during normal work hours.
 - b. Initiating actions to correct oxygen deficiencies.
 - c. Notifying FME when unscheduled systems maintenance is indicated.
 - d. Determining when it is safe for occupants to re-enter the area after an evacuation.
 - e. Determine the need for alarm systems in new areas.
 - f. Developing, distributing, and updating this procedure.

XIV. Bomb Threats And Suspicious Objects

- A. If you receive a written bomb threat:
 1. Notify the Protective Services Dispatch Desk at ext. 1091 immediately.
 2. Promptly write down everything you can remember about receiving the threat. This information will be needed by the police.

3. Remain calm. Do not discuss the threat with other staff members.
 4. If evacuation is ordered, proceed to the designated assembly area for your fire zone.
- B. If you receive a telephone bomb threat:
1. Remain calm.
 2. Listen carefully. Be polite and show interest. Try to keep the caller talking, so that you can gather more information. Ask the location and time the bomb will go off. Pay particular attention to vocal patterns and background noise.
 3. If possible, write a note to a colleague to call or, as soon as the caller hangs up, notify the Protective Services Dispatch Desk at ext. 1091.
 4. Promptly write down as many details of the threat as you can remember. FBI bomb threat information is immediately available on the back of the NCI-Frederick Telephone Directory.
 5. Do not discuss the threat with other staff.
 6. Do not pull a fire alarm to evacuate the building unless the time element requires immediate action. If evacuation is ordered, proceed to the designated assembly area of your fire zone. Relocate at least 300 feet away from the building as directed by the Incident Commander.
- C. If you receive a suspicious parcel, or if you find a suspicious object anywhere on the premises:
1. Keep anyone from handling it or going near it.
 2. Notify the Protective Services Dispatch Desk at ext. 1091 immediately.
 3. If you suspect a chemical or biological threat, wash hands thoroughly with soap and water.
 4. Promptly write down everything you can remember about receiving the letter or parcel, or finding the object. The police will need this

information.

5. Remain calm. Do not discuss the threat with other staff members.
6. If evacuation is ordered, proceed to the designated assembly area for your fire zone. Relocate at least 300 feet or more away from the building as directed by the Incident Commander.

Exhibit B-1-1. Emergency Procedures

Emergency Telephone Numbers

Dial "911" For ALL Emergencies.

Fire

1. Notify personnel in immediate area by shouting "FIRE!"
2. Evacuate immediate area.
3. Activate Fire Alarm.
4. Dial emergency number (911).
5. Do not attempt to control a fire without appropriate training.

Medical

1. Do not move victim (except for safety reasons).
2. Dial emergency number (911).

Hazardous Material Event

1. Evacuate and secure immediate area.
2. Dial emergency number (911).
3. Do not attempt to clean up a spill without appropriate training.

Facility Evacuation Signal - Fire Alarm

1. Report to the designated assembly area(s).
2. Contact your Supervisor or Safety (X1451) if you are not familiar with the assembly area location(s) for your building.