

Local Emergency Plan

CENTER FOR FUNCTIONAL NANOMATERIALS

LOCAL EMERGENCY PLAN

Building: 735

Occupancy: 120

Position	Name/Signature	Extension	Home Phone	Cell No.
Plan Preparer	Arthur Piper	5937	631-368-3432	631-258-5809
Building Manager	Arthur Piper	5937	631-368-3432	631-258-5809
Primary LEC	Arthur Piper	5937	631-368-3432	631-258-5809
Secondary LEC	Steve Hoey	7936	631-331-3471	631-241-8440
ES&H Coordinator	Steve Hoey	7936	631-331-3471	631-241-8440
Asst. ES&H Coordinator	Arthur Piper	5937	631-368-3432	631-258-5809
FSS Representative	Frank Zafonte	5565	631-929-3270	631-457-3793

Date Prepared: 4/4/2007

Frequency of Review: Periodically during the transition to operations period (until March 2008), then annually thereafter.

Date reviewed	Reviewed By	Review Type/Pages Changed
7/15/2007	Arthur Piper	General/3-5
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Every facility should establish an effective program to respond to emergencies. For this to work, every employee should be prepared to handle emergencies before they arise. This document outlines the Employee Action Plan to address workplace emergencies.

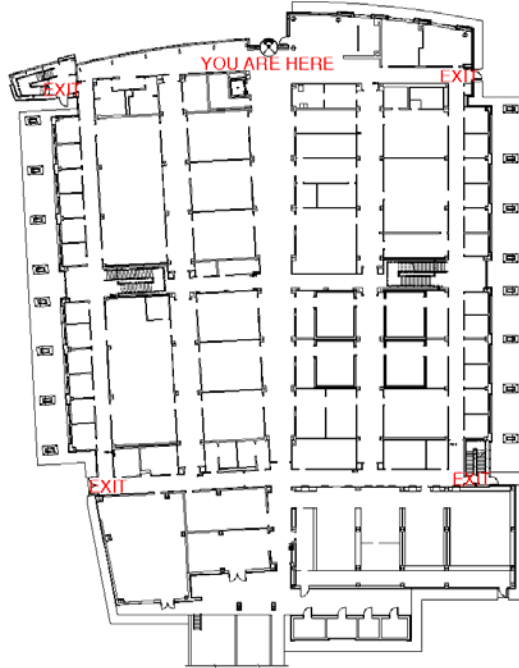
TO REPORT A FIRE, SPILL, MEDICAL OR OTHER EMERGENCY, DIAL 911 OR 2222. IF USING A CELL PHONE, DIAL 631-344-2222. IF A TELEPHONE IS NOT AVAILABLE, USE A FIRE ALARM BOX.

EMERGENCY EVACUATION PROCEDURES AND ROUTES

Every employee should familiarize themselves with exits in their workplaces, including a second way out in case the main way is blocked.

Building Map:

BUILDING 735 EMERGENCY INFORMATION



All employees are expected to leave the building and report to the outdoor assembly area when the fire alarm bells ring. No one is authorized to remain in the facility during an emergency.

ACCOUNTABILITY FOR EMPLOYEES

Accountability for employees should be performed after an evacuation. Based upon direction given in an emergency, all employees must assemble at the appropriate areas.

- BUILDING INDOOR ASSEMBLY AREA: Main Floor Central Corridor
 - BUILDING OUTDOOR ASSEMBLY AREA: West Parking Lot by Catch Basin
 - SHELTER-IN-PLACE AREA: Main Floor Central Corridor (Zone shut down of air handlers required)
 - PERSONNEL ACCOUNTABILITY: The LEC or designee will account for employees. The information must be given to Fire-Rescue or Police upon arrival.
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SITE-EMERGENCY SIGNALS

- CONTINUOUS SOUNDING OF SITE SIRENS FOR FIVE MINUTES - Proceed immediately to the Indoor Building Assembly Area. Await instructions that may include the nature of the emergency, the type, sequence, and routes for evacuation.
- INTERMITTENT SOUNDING OF SITE SIRENS FOR FIVE MINUTES - Evacuate the Site Immediately.
- Tone Alert Radio: Zone 10

Location: Permanent mount at Main Fire Alarm Panel adjacent to main (North) entrance door. An additional TAR will be stationed in the Local Emergency Coordinator's office (room # 2006) .

Responsible Individual: Arthur Piper

FOR ADDITIONAL INFORMATION OR QUESTIONS, CONTACT THE
LOCAL EMERGENCY COORDINATOR

LOCAL EMERGENCIES AND SIGNALS

FIRE: Upon notice of fire or sounding of the alarm bells, proceed immediately to the Outdoor Building Assembly Area. Await instructions that may include the nature of the emergency, the type, sequence, and routes for further evacuation. When the fire alarm bells ring, a call should be made to the BNL Fire Rescue Group on extension 2222 (from a safe location), confirming their receipt of the alarm. Any information known about the condition that caused the alarm should be given at that time.

MEDICAL: Rescue and Medical Duties - Employees are expected to help minimize damage and assist personnel during an emergency to the best of their abilities and when their safety is not threatened. The BNL Fire Rescue Group is trained, equipped, and has the main responsibility to render emergency assistance. In the event of any medical emergency, call extension 2222 or 911.

SPECIFIC HAZARDS:

- Radiological – None
- Toxicological – Research with Nanomaterials, toxic gases
- Physical – Confined space in ME room air handler units, elevator pit and basement (pit)
- Other – Cryogenic liquids/gases in laboratories/service chases

OTHER INFORMATION

Training - The Department/Division must designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees for this facility. They are as follows:

1. Name: Arthur Piper
2. Name: Steve Hoey
3. Name: Lorraine Davis

These personnel are responsible for reviewing the plan with each employee covered by the plan. This training occurs when the plan is initially developed; whenever the employee's responsibilities or designated actions under the plan change; and whenever the plan is changed.

Provide Fire/Rescue (Chief@bnl.gov) with one copy of this plan each time it is issued.

OPTIONAL INFORMATION

Description of Hazards

- A. The Center for Functional Nanomaterials facility requires a Local Emergency Plan for the following reasons.
1. Compressed gas cylinders, some of which may contain flammable, toxic or pyrophoric gases, which have the potential to cause property damage or injury to personnel. Bulk gases are stored on the south side of the building in an approved bunker.
 2. Research conducted with nanomaterials. Nanomaterials are considered toxic substances and pose health risks if used in uncontrolled environments (i.e.: if engineered controls failed).
 3. Lasers are present in laboratories in this facility.
 4. Oil and hazardous material spills: Pump oils and solvents will be used in moderate quantities for work carried out in this facility. These operations pose potential environmental risks
 5. Pressurized steam systems present significant potential/thermal energy hazards under failure conditions.
- B. Building 735 contains a 90-day collection bunker room for hazardous waste.
- This is located in the 90-day bunker room (room # 1034) located at the south end of the building, east of the loading dock (dedicated room for this purpose).
- Emergency exits are located at the North (main) entrance, Northwest, West, Northeast, East, Southeast (from clean room) and South locations of the main floor of the building. Emergency escape from the 2nd floor of the building to the 1st floor is through stairs, which are located in the center halls East & West , and the Southeast and Northwest corners of the building.
- C. The types of emergencies that might affect this facility are
1. Operations
- During normal operations, the emergencies that may affect this facility are
- a. Fire – A fire in this facility could result in property damage/personnel injury/fatality
The main fire hazard(s) is/are from flammable gases, electrical systems and combustible materials
Fire extinguishers are located in the common areas and will be added to specific laboratories as deemed appropriate during Experimental Safety Reviews. Extinguishers in common areas are located with a maximum travel distance of 75 feet to an approved extinguisher.
 - b. Explosions – Compressed gas cylinders may contain flammable or pyrophoric gases. Pressurized steam systems present significant potential/thermal energy hazards under failure conditions.
 - c. Industrial Accidents - An industrial accident is possible in the Laboratories, Service chases, Mechanical Equipment Rooms, elevator pit, and basement (pit) areas. In these locations there are confined spaces, steam systems, electrical systems, compressed gases, lasers, cryogenic liquids/gases, and/or entrapment hazards present.
 - d. Personnel Injury or Fatality - The greatest potential for personnel injury or fatality exists during maintenance/repairs of the building utility systems (ie: steam, electrical, etc)
During these operations, task specific procedures and/or work planning documentation are required to address safety concerns related to work on the utility systems.
Specific procedures for these operations are found in Plant Engineering MMC and/or CFN facility specific documents.
 - e. Uncontrolled Release of Hazardous Materials - The possibility of an uncontrolled release of toxic gases, nanomaterials exists for this facility (if engineering controls were to fail).
 - e. Personnel Exposure is a potential problem in the Laboratory's due to exposure to nanomaterials (if engineering controls were to fail).

- h. Oil and Hazardous Material Spills - All chemicals are stored within secondary containers capable of containing the full contents of the material in the event of a spill. In addition, spill kits are located in the 90 day bunker and key service chase locations (where functional labs are located) .
 - i. Air and Water Pollution - This facility does not have any operations that allow permitted discharges to the water and air. Safety Systems have been set up in these operations to significantly minimize the likelihood of accidental discharge to the air or water.
 - j. Accidental criticality: N/A
 - k. Malevolent acts: Facility access will be controlled with card reader access systems and standard key control measures. Facility will have video surveillance at front entrance for off-hours access monitoring. This video will be monitored at police headquarters.
2. This facility does not have quantities of chemicals in excess of SARA Threshold Planning Quantities (TPQ).

Building Emergency Equipment

(State below or on diagram the emergency equipment in the building). (This information may be maintained elsewhere, but must be readily available to emergency responders. If maintained elsewhere, state its location).

A. Fire Protection

- 1. Fire extinguishers are located in the common areas at this time (maximum travel distance of 75 ft.). As laboratory operations are planned, fire extinguishers will be added to the laboratories as appropriate.
- 2. Smoke detectors are located throughout the building and in select return air ductwork.
- 3. Automatic sprinkler systems (wet type) are located throughout the building
- 4. Fire alarm pull boxes are located at each exit
- 5. Standpipe connections are located on the north (outside) wall

B. Emergency and Safety Related Equipment

- 1. Spill control products such as floor drain covers/oil absorbent mats, etc.; will be located in the 90-day waste storage area and key service chase locations (where functional laboratories are located).
- 2. Fire Alarm PA System is located at the main Fire Alarm Panel and is maintained and controlled by Plant Engineering/Emergency Services.
- 3. Safety showers and emergency eye wash stations are located in the service corridors outside the laboratories and within the laboratories also.