

National High Magnetic Field Laboratory Safety Program

TITLE: Emergency Action Plan	SUBJECT: Emergency Action Plan (EAP)
PROGRAM NUMBER: SP-3	EFFECTIVE DATE: March 5, 2007
REVISION NUMBER: 005	REVISION DATE: September 4, 2018
ISSUING AUTHORITY: Safety and Admin	Approval: NHMFL Deputy Lab Director
Additional Approval Signatures on Revision and Approval Page	

Overall Mission and Overview:

The National High Magnetic Field Laboratory (NHMFL) Environmental, Health, and Safety (EHS) program's mission is to:

Provide support and guidance to all NHMFL departments with the implementation, maintenance and review of a comprehensive environmental, health, and safety program. The primary goal of the MagLabs EHS program is to control, reduce or eliminate work-related injuries, illnesses and loss of NHMFL resources.

The NHMFL is charged by the National Science Foundation (NSF) to safely:

- Promote magnet-related research to serve an interdisciplinary scientific user community.
- Provide unique high-magnetic-field facilities through a competitive and transparent proposal review process.
- Advance magnet and magnet-related technology.
- Partner with universities, other national laboratories and industry to enhance national competitiveness in magnet and related technologies.
- Serve the NSF as a prominent example of its successful stewardship of large research facilities.
- Support science and technology education in the United States.
- Increase diversity in the science, technology, engineering, and mathematics workforce
- Promote collaboration among our three partner institutions: Florida State University (FSU), the University of Florida (UF) and Los Alamos National Laboratory (LANL).

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1.0 PURPOSE

The purpose of this Emergency Action Plan (EAP) is to establish a system for managing emergencies that may affect staff, public safety, and the operation of the NHMFL. This plan focuses on preparing for emergencies that might occur and responding effectively using any necessary resources.

2.0 SCOPE

This EAP applies to all emergencies occurring on the NHMFL property and any emergencies occurring on surrounding or nearby properties, which may affect NHMFL personnel, property, or operations. Types of emergencies covered in this plan include:

- General Emergencies – Section 6.0
- Natural Disasters – Section 7.0
- Man Made Emergencies – Section 8.0

3.0 PROGRAM RESPONSIBILITIES

The NHMFL Safety Department is responsible for maintenance of the plan and oversight of its implementation. The Safety Department must also evaluate the effectiveness of the plan based on drills and exercises, and actual emergencies. A drill or emergency exercise should be implemented at least annually. The Safety Department must review the EAP whenever there is a change in operations or conditions at the laboratory that could affect response to an emergency. Examples of changes that may affect the EAP would be moving the chemical or waste storage areas, construction of new rooms or walls that affect evacuation routes, or installation of new equipment, machinery, or chemical storage tanks.

4.0 SITE OVERVIEW

4.1 LOCATION, DESIGN AND CONSTRUCTION

The NHMFL is located at 1800 East Paul Dirac Drive in Leon County, Florida. It is approximately 1.5 miles southwest of the Florida State University (FSU) campus. The NHMFL is located in the Innovation Park approximately 2.5 miles southwest of downtown Tallahassee. Residential communities are located approximately 0.5 to 1 mile in all directions. The NHMFL facility has three floors in the A, B, and C General Science Buildings and OPMD (although access is controlled for floors 2 and 3). The NMR building has two floors. The General Science Buildings occupy 200,000 square feet, the OPMD occupies 90,000 square feet, and the NMR occupies 27,000 square feet. The total area for all buildings is 317,000 square feet. The General Science Buildings were constructed in the mid 1980's and the NMR and OPMD Buildings were constructed in the early 1990's. All buildings have sprinkler systems throughout. Materials used in construction include a concrete slab foundation, steel frame, concrete floors, and window walls, metal ribbing and synthetic plaster on the exterior. Portions of the NMR Building are framed with glue laminated Mexican pine to be compatible with the equipment in that building. The laboratory contains office areas, chemical laboratories, magnet fabrication and testing areas, magnet experiment cells, and laser laboratory areas. The laboratory is used 24 hours per day by staff, students, and visiting scientists. There are approximately 150 to 300 people in the laboratory during the working hours of 7 a.m. to 6 p.m. There are approximately 50 to 100 people in the building from 7 p.m. to 6 a.m. In addition to the main Facility, the Shaw Building is two floors and is located across the street at 2031 East Paul Dirac Drive. The Shaw Building has laboratories that use chemicals and magnets.

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4.2 SECURITY AND SITE CONTROL

The Florida State University Campus Police and NHMFL Safety Department provide security for the NHMFL. The Tallahassee Police Department also provides coverage to this area. All persons in the building must wear NHMFL issued identification badges. NHMFL employees and affiliates are issued access badges upon completion of the appropriate safety training. Visitors are required to check in with the receptionist at the front desk located in the lobby and receive a visitor's badge. The receptionist calls the person to be seen to the lobby to escort the visitor. If contractors or vendors will be performing work at the NHMFL, the Facilities department will facilitate appropriate safety training and issue a contractor/vendor badge. Visitors classified as Users will receive a user access badge from the coordinator of the department they are visiting upon the completion of the user safety training.

4.3 COMMUNICATIONS AND EMERGENCY ALARMS

Communication at the NHMFL is via standard telephone service / cellular phone service and handheld two way radios. In the event of an emergency, notification can be made over the building intercom system to the DC Magnet, General Science and NMR Buildings. The fire alarm consists of beeping horns and blinking strobe lights. Pull stations are located throughout the facility. Each person at the laboratory should identify the locations of pull stations in their work area.

4.4 REPORTING

Call 911 immediately to report an emergency. The call will then be routed to the appropriate agency based on the nature of the emergency. For Spills and Safety related Emergencies dial 855-SAFEMAG (855-723-3624). The location and nature of the emergency must be accurately and completely described to ensure that the appropriate emergency response personnel are dispatched and that adequate resources are immediately allocated to the emergency.

Reporting to governmental agencies may be required in the event of a chemical release or spill. The NHMFL Safety Department is responsible for reporting to governmental agencies information related to spills or releases. The Safety Department will notify the Associate Director for Management and Administration whenever it is necessary to report to a governmental agency.

4.5 OUTSIDE AGENCY ASSISTANCE

In the event of an emergency, it may be necessary to contact outside agencies for reporting purposes or for assistance. While 911 can be used to summon the fire department, police, and/or emergency medical services, events may warrant the need to contact a governmental agency or consultant for technical assistance. The NHMFL Safety Department will contact the appropriate outside agencies for guidance and technical assistance whenever necessary.

4.6 PERSONNEL ROLES AND KEY CONTACTS

In the event of an emergency, several NHMFL staff member will play key roles in the response. The Key Staff member are shown in Table 1. The contacts are listed in order in which they should be contacted. The NHMFL utilizes a "Floor Sweeper" system to ensure all personnel evacuate promptly and safely.

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TABLE 1 – KEY CONTACT CALL LIST

POSITION	NAME	WORK TELEPHONE	HOME/CELL TELEPHONE
Head of Facility Engineering and Operations	John Kynoch	850-644-8965	850-514-3246 850-570-5645
Senior Electrical Engineer	Marshall Wood	850-644 7592	850-868-0272
Associate Director, EH&S	Laymon Gray	850-645-2279	850-508-2042
Environmental Health & Safety Engineer	Chris Rodman	850-510-8581	855-SAFEMAG 855-723-3624
Environmental Health & Safety Engineer	Carlos Diaz-Jimenez	850-294-0675	855-SAFEMAG 855-723-3624
Environmental Health & Safety Engineer	Alfie Brown	850-274-1136	855-SAFEMAG 855-723-3624
Head of Magnet Operation	Bryon Dalton	850-644-1907 850-445-9911 Cell	850-514-7454
Control Room	Control Room Operator	850-644-4416 850-408-8102 Cell	850-408-8102
Cryogenic Operations	Mark Vanderlaan	850-644-8517	904-607-6814
Assistant Lab Director, DC Instrumentation/Operations	Scott Hannahs	644-0216	415-439-1129
Director DC User Program	Tim Murphy	850-644-0682	850-544-4006
FSU Maintenance	Tammy Ransom	850-644-6428	850-508-6512 at night: 850-644-2424.
Deputy Lab Director	Eric Palm	850-644-1325	850-766-4418
Director	Greg Boebinger	850-644-0851 850-597-1134 Cell	850-893-9271

The FSU Police and Tallahassee Fire Department have been briefed on this EAP and are prepared to respond appropriately to emergencies at the laboratory.

5.0 How to use the EAP and Procedures

This EAP provides information that can be used by personnel in the event of an emergency. Sections 1 through 5 outline the basic requirements for the EAP and the personnel involved in emergency response.

The following sections of the EAP provides instruction on how to respond to specific types of emergencies. While these provide procedures that cover the types of emergencies that can be anticipated at the NHMFL, there is no guarantee there will be a procedure for every emergency. In the event that a procedure is not available for a specific emergency, personnel are expected to exercise common sense and good judgment based on their knowledge of NHMFL operations and the conditions that exist at the time of the emergency. Note: If calling from non-campus phone dial 644 or 645 and the last 4 digits of the number desired. If calling out of the local area dial 850, the prefix (ex. 644) and the last 4 digits.

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6.0 General Emergencies

6.1 INTRODUCTION

A variety of emergencies can occur at the NHMFL. Each employee must understand the proper procedures to be followed in various situations. The following general emergency procedures are covered in this section.

- Employee Responsibilities In An Emergency
- Reporting Emergencies
- Evacuation
- Medical Emergencies
- Natural Disasters
- Man-made Emergency situations

6.2 EMPLOYEE RESPONSIBILITIES

Responsibilities of the employee in an emergency:

1. Communicating emergencies to supervisors, fellow employees, safety personnel, control room operator(s), the FSU police, and the Tallahassee Police, Fire, and Emergency Medical Services completely and accurately as needed.
2. Activating the fire pull station in the event of a fire or other emergency.
3. Evacuation of the building when the evacuation alarm sounds.
4. Reporting to the rally points.
5. Assisting others in the evacuation.
6. Providing or seeking medical care for injured persons.
7. Knowing the emergency procedures for your area
 - a. Reviewing the wall posters that show evacuation procedures, routes and exits.
 - b. Talking to your supervisor about what to do in an emergency – asking questions to make sure you fully understand.
 - c. Knowing the shutdown procedures for equipment in your area.
 - d. Being sure that Emergency numbers are posted on the telephone or near the door.

If unsure contact the NHMFL Safety Department at 855-SAFEMAG (855-723-3624)

See diagram in Appendix A for emergency exits and rally points

6.3 REPORTING AN EMERGENCY

To report an emergency:

1. Dial 911.
2. Explain the nature of the emergency (be as specific as possible), location, extent of the injury or damage, your name, and phone number.
3. Call the Safety Department at 855-SAFEMAG (855-723-3624).

Unless you must leave or assist in the emergency, stay on the phone to allow further direct communication as needed. For fires or other emergencies that require immediate evacuation, use the

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fire alarm pull station as you exit. This activates the alarm and automatically notifies the FSU police and the local fire department.

6.4 MEDICAL EMERGENCIES

If a medical emergency should occur:

1. Dial 911.
2. Explain the nature of the emergency (be as specific as possible), location and extent of the injury or damage, your name, and phone number.
3. Call the Safety Department at 855-SAFEMAG (855-723-3624).
4. Deliver First-Aid/CPR/AED (if trained) until emergency medical services arrive.
5. If possible, go or send someone to meet the Emergency Medical Services personnel and guide them to the injured person.

For minor injuries, contact the NHMFL Safety Department at 855-SAFEMAG (855-723-3624).

6.5 LOSS OF POWER

When electrical power fails, there may be a delay until emergency generators provide adequate lighting. If you find yourself in the dark, do not panic or move about. When emergency lighting is activated, remain in your area unless instructed by the FSU Police or your supervisor, to leave.

For the OPMD Building only – The NHMFL Control Room will initiate shutdown operations in the event of an emergency shutdown due to loss of electricity or cooling water.

6.6 EVACUATION

When the fire alarm sounds or you are notified to evacuate, leave the building and proceed calmly to the rally point (assembly area) nearest the door you exited. (See posted emergency evacuation maps located throughout NHMFL). The NHMFL uses a “Floor Sweeper” system to check that all personnel have evacuated. Quickly evacuate if told to do so by a “Floor Sweeper”. All personnel shall remain outside of the building until the “all clear” is given.

Rally points have been established for all NHMFL evacuation routes and are indicated by signage posted on the outside of the facility. See diagram in Appendix A for emergency exits and rally points.

If you must evacuate your area:

1. If necessary, follow emergency shutdown procedures for equipment if time allows.
2. Exit calmly using the closest safe exit. If possible, close your office door as you exit.
3. Do not delay by looking for belongings or other people unless you are a designated “buddy” for a handicapped employee.
4. Stay away from building utility areas, and all firefighting equipment and hydrants.
5. Do not drive any vehicles unless instructed to do so.
6. Do not leave the facility’s ground for any reason unless instructed by FSU Police, City of Tallahassee Fire Department or your supervisor.
7. Report to the rally point nearest the door where you exited the building. Visitors will need to report to the rally point nearest the door they exit from the building.

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8. Stay at the rally point until notified by NHMFL management or FSU Police to return to your work area.
9. All personnel shall remain at a minimum 100' from the building.
10. If possible, make sure you close your office door.

6.7 EVACUATION OF INDIVIDUALS WITH DISABILITIES

If you have a disability that hinders your ability to evacuate the building, follow these procedures:

1. If the fire alarm sounds, and if you are unable to make your way down stairs, obtain assistance from other individuals who are familiar with your handicap.
2. If no one is able to assist you down the stairs proceed to the stairwell and inform other evacuees that you need immediate rescue. Stairwells are designed to provide protection from smoke and fire; however, doors to these areas must be closed in order to afford you this protection.
3. If you are unable to make your way to a stairwell or rally point, ask someone to activate the fire alarm on your floor. This will indicate your location to rescue personnel. Also, ask individuals to inform rescuers of your whereabouts in person or by telephone or use the telephone to call 911 to tell the dispatcher where you are.
4. In a fire, position yourself so that your face is as close to the floor as possible. Crawl if necessary. Smoke fills the upper spaces first and most of the available oxygen is near the floor. Avoid smoke if possible. If smoke becomes too dense to breath, place clothing or some other heavy cloth over your nose and mouth to filter as much smoke as possible. Wet the cloth if possible.

7.0 NATURAL DISASTER

Employees should monitor local news channels and radio stations or call 644-INFO outside the laboratory or 4-INFO within the laboratory for information about the closing of the laboratory due to natural disasters. Information is also available at <http://www.fsu.edu>. The NHMFL shall be considered closed whenever FSU is announced closed. Employees are urged not to report to work under these circumstances. NHMFL has developed guidelines for the following natural disasters:

1. Hurricanes
2. Tornados
3. Floods
4. Earthquakes

7.1 HURRICANES

Hurricanes are severe tropical storms with sustained winds of 74 miles per hour or greater. Winds can reach 160 miles per hour and extend inland for hundreds of miles. Hurricanes bring torrential rains and a storm surge of ocean water that crashes into land as the storm approaches. Hurricanes also spawn tornadoes.

The National Weather Service issues hurricane advisories as soon as the hurricane appears to be a threat. The hurricane season lasts from June through November.

7.1.1 HURRICANE PREPARATION MEETING

If a hurricane is predicted to hit the Tallahassee area, a cryogen assessment meeting will be held 5 days prior to expected landfall. Two hurricane-planning meetings will also be held. The first will be held 4

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days prior to expected landfall. The second will be held two days prior to expected landfall. These meetings will be held to determine the appropriate level of preparation necessary, and to take an accounting of the progress towards these preparations. This meeting shall be called by the Director's Office/Management and Administration. Attendees shall include the Executive Committee and representatives from Computer Support, Facilities, Safety, Resistive Magnet Operations, and NMR-ICR & EMR.

The meeting will cover the following topics:

1. Latest Storm Prediction – Safety Office
2. Status of Emergency Generator – Facilities
3. User / Visitor Communications – All user Facilities
4. Status of 900 MHz Helium Requirements - NMR

If an evacuation is likely, the meeting shall also include discussion of the following:

1. Emergency Contact List – Director's Office/Management and Administration.
2. Communication of Procedures / Plans – Safety, Director's Office/ Management and Administration, Computer Support.
3. Communication After the Storm.
 - a. Web Based – Computer Support.
 - b. Remote Information Phone Number – Director's Office/ Management and Administration.
 - c. Email notification (use email list with magnet.fsu.edu and a private email address in case server is down).
4. Computer Data Backup Plan - Computer Support.
5. Emergency Generator Load Shedding Plan – Facilities.
6. Early Re-entry Authorization – Safety.
7. Cryogen status and needs.
8. Determine is personnel are needed to stay. If so notify Florida State Police Department (FSUPD will provide a safe place to shelter on Campus during the storm).
9. Establish a chain of command among personnel that will be staying.
10. Determine who has master keys and their accessibility to those that will be here during the storm.
11. Create a decision schedule of how soon actions must be taken before the storm.
12. Ensure each department has a plan for shutting down and securing their areas.
13. Prioritize the distribution of gasoline, power, and cryogenes.
14. Create a post storm checklist of items to assess for safety and damage by department.

The hurricane planning meeting form (Form A) should be completed during the meeting.

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Form A

Personnel that are planning to stay at the NHMFL during the hurricane:

Department	Name	Phone	Name	Phone
Director Office				
Mgt. & Admin.				
I&O				
MS&T				
Cond. Matter				
CIMAR				
ASC				
Geochemistry				

Chain of command:

_____	_____
Name	Position
_____	_____
Name	Position
_____	_____
Name	Position

Send out final reminder to add emergency phone numbers to personnel by _____

Print and distribute emergency numbers report by _____

Order Cryogenics by _____

Start load shedding by _____

Secure unstable areas and remove all chemicals from fume hoods by _____

Reprogram security system and place sliding locks by _____

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Each department should develop their own plan. These plans should be stored on the z drive in lab wide use/hurricane preparation folder. The checklist below can be used as a guideline to develop a departmental plan.

Hurricane Preparation Checklist

Pre Storm Check List	Yes	No
Hold a department staff meeting to discuss hurricane preparation		
Unplug all non-essential electrical equipment		
Remove all chemicals from fume hoods and secure any experiments		
Whenever possible shut down all magnets		
Secure or store any essential equipment		
Secure all compressed gas cylinders		
Encourage all department personnel to enter emergency contact info into personnel system		
Ensure everyone has copy of emergency contact list		
Find out who is planning to stay. Notify the Safety Department so FSUPD can be notified.		

7.1.2 DEPARTMENTAL ROLES AND RESPONSIBILITIES

In the event of an emergency and evacuations, several NHMFL departments will play key roles in the response.

Director's Office/ Management and Administration

The Director's Office/ Management and Administration is responsible for:

1. Calling the hurricane preparation staff meeting.
2. Maintaining a document in the personnel system, which contains evacuation contact information for key employees. A hardcopy of this spreadsheet should be available for employees at the Atrium receptionist the day before the storm is expected to affect the lab.
3. Providing information for the FSU website related to NHMFL operations as needed.
4. Contacting NSF, as required.

Facilities

The Facilities Department is responsible for:

1. Ensuring the reliability of the Emergency Generator.
2. Contacting FSU Maintenance Generator Technician and Generator Fueling Contractor.
3. Communicating needs such as (i.e. fuel, debris removal, and cleanup) to the FSU Emergency Management Team so arrangements can be made with Garner Environmental to provide services.
4. Developing a Generator Load Shedding Plan to maximize run time. Implementing the procedure by turning equipment off prior to evacuation.
5. Communicating with the City of Tallahassee and the control room after the storm to obtain information on power availability (City of Tallahassee Control Center 850 - 891-3020 or 850- 891-3022)

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6. Returning to the NHMFL Lab as soon as possible after the storm to assess damage and restore utilities. The Facilities department with the Safety Department will determine when it is safe for personnel to return.
7. Working with FSU Maintenance after to storm to make repairs and minimize loss.
8. Securing loose material on the exterior of the building prior to the storm.

Safety Department

The Safety Department is responsible for:

1. Providing storm forecast information.
2. Reporting on communications with Campus FSU EH&S.
3. Obtaining early reentry clearance for key Safety, Facilities and Operations staff.
4. Return to the Lab as soon as possible after the storm to assess damage. The Facilities department with the Safety department will determine when it is safe for personnel to return. Determine skills of team needed to assess damage.
5. Communicate recommendations to the lab concerning storage of hazardous substances.

Computer Support

The Computer Support Department is responsible for:

1. Moving the latest backup of computer data to a secure location.
2. Developing a handout explaining how to remotely access email, and servers in the event that the power is still on, but personnel have evacuated.
3. Developing a plan to get information to evacuees via the Los Alamos web site and communicating this to personnel before evacuation.
4. Providing guidance to lab personnel on storage of their computer during the storm.

Operations

The Operations Department is responsible for:

1. Communicating with resistive magnet users on the plans for operations and assisting with evacuation as necessary.
2. Providing helium supplies for departments to top off their magnets.
3. Restarting NHMFL utilities within the lab once they are available.
4. Communicating with the city of Tallahassee to restore power (Substation – 891-5063 or 694-8204).

CIMAR

The CIMAR Department is responsible for:

1. Communicating with CIMAR magnet users on the plans for operations and assisting with evacuation as necessary.
2. Developing a plan to minimize damage to the 900 MHz magnet.

7.1.3 GENERAL PRECAUTIONS AND RECOMMENDATIONS

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The Safety and Facilities departments will return to the building as soon as possible after the storm to inspect and determine if it is safe for lab personnel to return to the lab. Expected problems as a result of the storm include:

- Loss of Power, Phone, Water, Data Network for an extended period.
- Water entry into the building from broken windows, roof damage, damaged exhaust fans
- Chemical fumes from exhaust failure.
- Access to Generator Fuel, Cryogenics may be restricted for an extended period.
- Law Enforcement may restrict access to the area for an extended period after the storm.

Departments should produce their own action plans for minimizing damage during a storm. This should include contact lists, plans for securing chemicals and turning off unnecessary equipment.

7.1.4 DURING A HURRICANE WATCH

A hurricane is possible within 24 to 36 hours. An evacuation may be necessary.

1. Gather emergency supplies, fuel for generators, batteries, first aid supplies, etc.
2. Begin to shutdown non-critical equipment.
3. Plan evacuation routes.
4. Stay tuned for additional advisories.
5. Tune to local radio, television stations, or internet sites for additional information.

7.1.5 DURING A HURRICANE WARNING

A hurricane will hit the warning area within 24 hours. Take precautions at once, including:

1. Pack clothing and necessities, including food and blankets.
2. Prepare your vehicle or make sure you have transportation if an evacuation occurs.

If advised, evacuate immediately.

7.1.6 IF YOU ARE CAUGHT IN A HURRICANE

If you are inside a building:

If you are located above the first floor or on a mezzanine, move immediately to the first floor and assemble in the center of the building away from glass windows or skylights. If there is falling debris, sit on the floor with hands and arms covering the head and face. For protection from falling objects and debris, position yourself under a table or similar fixture.

If you are outside a building:

1. Seek shelter on the first floor of a brick building.
2. If no shelter is available, crouch down in a tucked position.

7.2 TORNADOS

Tornadoes are violent local storms that extend to the ground with whirling winds that can reach 300 miles per hour. Spawned from powerful thunderstorms, tornadoes can uproot trees and buildings and

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turn harmless objects into deadly missiles in a matter of seconds. Damage can be in excess of one-mile-wide and 50 miles long.

Tornadoes can occur in any state but occur more frequently in the Midwest, Southeast, and Southwest. They occur with little or no warning.

7.2.1 TORNADO WARNINGS AND WATCHES

Tornado Watch - Tornadoes are likely. Be ready to take shelter. Stay tuned to the radio and television stations for additional information.

Tornado Warning - A tornado has been sighted in the area or is indicated by radar. Take shelter immediately.

7.2.2 IF A TORNADO HITS TAKE SHELTER

The best protection in a tornado is usually an underground area. If an underground area is not available, consider:

1. Small interior rooms on the lowest floor and without windows (ex. restrooms, storage closets).
2. Hallways on the lowest floor away from doors and windows.
3. Rooms constructed with reinforced concrete, brick, or block with no windows and a heavy concrete floor or roof system overhead (stair cases)
4. Protected areas away from doors and windows.

Once in a shelter, protect your head with your arms and crouch down.

If shelter is not available or there is no time to get indoors, lie in a ditch or low-lying area or crouch near a strong building. In addition:

1. Be aware of the potential for flooding.
2. Use arms to protect head and neck.

If in a car:

1. Never try to outride a tornado in a car or truck. Tornadoes can change direction quickly and can lift up a car or truck and toss it through the air.
2. Get out of the car immediately and take shelter in a nearby building.
3. If there is no time to get indoors, get out of the car and lie in a ditch or low-lying area away from the vehicle. Be aware of the potential for flooding.

The following locations are not safe during a tornado:

Auditoriums, cafeterias, and gymnasiums that are covered with a flat, wide span roof (such as OPMD, NMR buildings). Lightweight modular offices or mobile home-size buildings offer no protection from tornadoes.

7.3 FLOODS

Floods are the most common and widespread of all-natural disasters. Most communities in the United States can experience some degree of flooding after spring rains, heavy thunderstorms, or winter thaws. Most floods develop slowly over a period of days. Flash floods, however, are like walls of water that develop in minutes. Flash floods can be caused by intense storms and dam failure.

The NHMFL is in an area that is prone to flooding. Roads in the area that are more likely to flood include: Lake Bradford Rd., Levy Ave., Pottsdamer St., and Roberts Ave. In addition, roads that may be needed by employees to travel between the lab and home may be prone to flooding. Employees should become familiar with areas that are likely to flood, watch for flooding during or following heavy rain, and plan alternate routes.

7.3.1 DURING A FLOOD WATCH

1. Listen to the radio for the latest storm information and check websites.
2. If instructed to do so, shutdown equipment and be prepared to move equipment and supplies to higher levels in the building.
3. Be prepared to evacuate

If indoors:

1. Turn on a battery-operated radio or television to get the latest emergency information.
1. If told to leave, do so immediately. Follow the instructions of the FSU Police and local authorities.

If outdoors:

1. Climb to high ground and stay there.
2. Avoid walking or driving through floodwater. If it is moving swiftly, water 6 inches deep can sweep you off your feet or push your vehicle off the road.
3. If your car stalls, abandon it immediately and climb to higher ground. Many deaths have resulted from attempts to move stalled vehicles.

7.3.2 DURING AN EVACUATION

1. If advised to do so, evacuate immediately.
2. Evacuation is much simpler and safer before flood waters become too deep for ordinary vehicles to drive through.
3. Follow recommended evacuation routes.
4. Do not attempt to report to work until flood waters recede.

7.3.3 AFTER A FLOOD

Flood dangers do not end when the water begins to recede. Follow these procedures after a flood:

1. Avoid low-lying areas.
2. Be alert for emergency vehicles, work crews, etc.
3. Listen to the radio or television and do not return until authorities indicate that it is safe to do so.
4. Contact FSU Police at 850-644-1234 to determine if you can return to the laboratory.

7.4 SINKHOLES AND EARTHQUAKES

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7.4.1 SINKHOLES

A Sinkhole is a hole or depression in the ground that results from surface material moving into subsurface pathways caused by the weathering process. A sinkhole occurs by either gradual subsidence to form a depression in the landscape or by collapse to form an abrupt break in the soil. Florida has more sinkholes than any other state in the nation.

Collapse sinkholes are the most common type in Florida. They happen suddenly where the overburden is thick with soils and heavy clay. Collapse sinkholes are deep, steeply sided holes in the ground. They are frequently triggered by fluctuations in the water-table. As water levels fluctuate, the roof of the cavity is stressed and weakened. When the water-table drops too far, the cavity walls are unsupported and the ceiling becomes too weak to hold the heavy overburden. Eventually, the ceiling collapses and a sinkhole is formed. A conical debris mound left on the sinkhole floor is all that remains of the cavity ceiling.

If a sinkhole forms on a street:

1. Mark and secure the sinkhole.
2. Contact the Safety Department at 855-SAFEMAG, 855-723-3624.
3. Contact the City of Tallahassee Public Works Department (850) 891-5300.

If a sinkhole forms on the property:

1. Mark and secure the sinkhole.
2. Determine if the structure is in danger (cracks in walls, floors and pavement).
3. If there is no danger to the structure and the sinkhole is small, fill the hole with clean sand or dirt and monitor it for future growth.
4. If it has been determined that the structure is in danger, contact the Police Department at 850-644-4-1234 and the Safety Department at 855-SAFEMAG (855-723-3624).
5. Instruct affected employees to stay out of the area.

7.4.2 EARTHQUAKES

Earthquakes are not very common in this area but if they occur, they can seriously damage buildings and their contents; disrupt gas, electric, and telephone services; and trigger landslides, flash floods, and fires. After shocks can occur for weeks following an earthquake.

In many buildings, the greatest danger to people in an earthquake is when equipment and non-structural elements such as ceilings, partitions, windows, and lighting fixtures shake loose. Earthquakes occur suddenly and without warning.

Take the following precautions during an earthquake:

1. Stay calm and keep others calm.
2. If indoors, stay there and get under an inside doorway, an inside corner of the room, or a desk or table to avoid falling objects, or brace yourself against an inside wall.
3. Protect your head and neck. Crouch down on the floor with your arms over your head.
4. If outdoors, move away from power lines buildings, streetlights and other structures that could collapse.

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Take the following precautions after an earthquake:

1. Do not light matches, smoke, or operate electrical devices that could ignite gas leaks or flammable vapors.
2. Stay away from windows, skylights, and items that could fall.
3. Avoid downed wires and objects in contact with them.
4. Avoid areas where hazardous chemicals may be stored, damaged, or leaking.
5. Do not use elevators. Use stairways to leave the building if a building evacuation is necessary.
6. Use the telephone only in case of emergency or injury to yourself or others.
7. In an emergency, dial 911.

8.0 MAN MADE EMERGENCIES

8.1 SPILLS

The first rule for large hazardous materials releases is to stay out of and away from the spilled, discharged, or released material, whether it is a liquid, solid, or gas. If you are exposed to the material, get away from it and have the material removed and neutralized immediately.

Small, minor spills should be immediately cleaned up by lab personnel that caused the spill, providing the proper personal protective equipment is used, those involved have been trained in its use, and the proper procedures for cleaning up the spill or leak are used. Personal protective equipment must be appropriate for the hazard present.

8.1.1 SPILL RESPONSE

For all spills: Survey the scene and identify hazards.

When a spill occurs, assess the situation. Remember the following acronym (SWIMS)

S - Stop the spill (if possible)

W - Warn others

I - Isolate the area

M - Minimize exposure

S - Secure or start ventilation fans if necessary

If lab personnel are unsure of how to safely cleanup or contain a spill, or if the spill is too large for lab personnel to safely handle, the Safety Department should be immediately contacted at 855-SAFEMAG (855-723-3624). If a spill must be left to obtain cleanup supplies or to notify the Safety Department, secure the area and leave signage alerting others of the spill.

Note: If calling from non-campus phone dial 644 or 645 and then the last 4 digits of the number desired. If calling out of the local area dial 850, the prefix (ex. 644) and the last 4 digits.

Alert other occupants of the area to inform them of the situation. Evacuate the area if:

1. You feel that the spill could be hazardous to those remaining in the area.
2. Anyone is unconscious or seriously injured from the spill.

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8.1.2 CLEANUP OF SPILLS

Before proceeding with the cleanup of a spill, you must know the level of hazard for the size of the spill:

1. Use the Safety Data Sheet to assess the hazards. Is the material toxic? Is there an inhalation hazard? Skin or eye contact hazard? Ingestion hazard?
2. Does the material have any physical characteristics such as volatility, flammability, and water reactivity that may affect cleanup procedures?
3. Determine cleanup procedures and PPE required for cleanup.

8.1.3 FOR SMALL SPILLS - NO IMMEDIATE LIFE/HEALTH THREAT

1. Confine and clean up the spill according to the Safety Data Sheet.
2. Containerize and label the clean-up materials and contaminated trash.
3. Properly dispose of contaminated materials. Do not dispose of cleanup materials with the office trash.
4. Contact the Safety Department at 855-SAFEMAG (855-723-3624) for assistance if necessary.

8.1.4 FOR LARGE SPILLS - NO IMMEDIATE LIFE/HEALTH THREAT

1. Notify your immediate supervisor.
2. Contact the Safety Department at 855-SAFEMAG (855-723-3624).
3. Get necessary assistance for containing the spill. Cover all drains and shutoff the source of the spill.
4. If the material is flammable, shut-off all sources of ignition.
5. Use proper protective equipment, cleanup equipment, and procedures according to the Safety Data Sheet.
6. Avoid producing dust or aerosols.
7. Containerize and label the clean-up materials and contaminated trash.
8. Properly dispose of contaminated materials. Do not dispose of cleanup materials with the office trash.

8.1.5 ANY SPILLS WITH POSSIBLE LIFE/HEALTH THREAT

1. Evacuate all personnel from the area. Post barrier tape or control access to the area through the doorway.
2. Call 911.
3. Call the Safety Department 855-SAFEMAG (855-723-3624).
4. Prevent other people from entering the area until the appropriate authorities (Fire, Police, and HAZMAT Team) or the Safety Department arrives.

Report all spills to the NHMFL Safety Department at 855-SAFEMAG (855-723-3624).

8.1.6 ATTEND TO IMMEDIATE HAZARDS

1. Shut off the source of the spill (e.g., close the valve, upright the container)
2. If specific hazards are known, address them immediately. (e.g., eliminate sources of ignition for a flammable liquid spill).

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3. Immediately secure the area around the spill.

8.1.7 ATTEND TO INJURED PERSONNEL

If injury is severe or the person is unconscious, treat as a Medical Emergency. Call the **911** and give the following information:

1. Location of accident/incident - building and room number.
2. Types of material involved - liquid or solid (wet or dry), or gas.
3. Name of material involved if known.
4. Quantity involved.
5. Severity of injury.

Locate the Safety Data Sheet if available, after evacuating the area and contacting emergency personnel. If possible, go or send someone to meet emergency personnel and guide them to the emergency site.

8.1.8 FIRST AID FOR CHEMICAL EXPOSURES

1. Put on proper protective equipment, if necessary. Utilize Safety Data Sheet for guidance.
2. Move the exposed person to a safe area.
3. Notify Safety Department and supervisor.

Only attempt first aid if trained and qualified.

For Skin Contact

1. Remove contaminated clothing.
2. Immediately flush the affected skin area with large amounts of clean water for at least 15 minutes.
3. If symptoms persist after washing, seek medical attention.
4. Notify Safety Department and supervisor.

For Eye Contact

1. Promptly flush eyes with water for a prolonged period (minimum of 15 minutes); hold eyelids open.
2. Do not put anything else into the eye except water unless instructed to do so by an emergency physician.
3. Seek medical attention.
4. Notify Safety Department and supervisor.

For Chemical Inhalation

1. Remove individual to fresh air.
2. Seek medical attention.
3. Notify Safety Department and supervisor.

For Ingestion

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Refer to the Safety Data Sheet for proper treatment for ingestion. Encourage the victim to drink only if indicated on the Safety Data Sheet. DO NOT force fluids on an unconscious individual. In addition:

1. DO NOT induce vomiting except on the advice of a physician.
2. Seek medical attention.
3. Notify Safety Department and supervisor.
4. Contact the poison control at 1-800-222-1222 or 1-800-282-3171

Proceed with the necessary spill containment and clean-up procedures after rendering first aid.

8.2 FIRE AND EXPLOSION

The primary concern in the event of a fire is to evacuate everyone from the building as quickly as possible. Never place your personal safety in jeopardy during a fire!

When the fire alarm sounds or you are notified to evacuate, leave the building and proceed calmly to the rally point (assembly area) nearest the door you exited. (See posted emergency evacuation maps located throughout NHMFL). The NHMFL uses a "Floor Sweeper" system to check that all personnel have evacuated. Quickly evacuate if told to do so by a "Floor Sweeper". All personnel shall remain outside of the building until the "all clear" is given.

8.2.1 PREPARE FOR A FIRE OR EXPLOSION

Be sure you know:

1. The evacuation routes and exits for your area (Appendix A).
2. The locations of fire alarm pull stations in your area.
3. Special emergency safety and shutdown procedures for your area.
4. The locations of fire extinguishers.
5. How to assist persons with disabilities.
6. The location of the rally point for your area.

Talk to your supervisor about what to do in an emergency - ask questions to make sure that you fully understand.

8.2.2 IN THE EVENT OF A FIRE OR EXPLOSION

If you smell or see smoke, fire, or an explosion occurs, follow these steps:

1. Pull the manual fire alarm.
2. Call 911. Give your name and the location of the fire and any relevant information about the event (e.g., caused by, type of fire, etc.) and notify the Safety Department at 855-SAFEMAG (855-723-3624).
3. Do not attempt to use a fire extinguisher unless you are trained to use a portable fire extinguisher and the fire is in the beginning stages. Do not fight the fire until you have notified the fire department. Even if the fire is small, the alarm should be activated immediately.
4. If you are not involved with fighting the fire, evacuate the building.
5. Gather at your rally point. Stand by to tell officials the exact location of the fire and other pertinent information.
6. Stay at the rally point until the all clear is given to return to the building.

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8.2.3 EVACUATING A BURNING BUILDING

When you evacuate a burning building, follow these procedures:

1. Go to the nearest exit.
2. Feel doors for heat before opening. Use the back of your hand so you will not burn your palm. If the door is hot, try another exit.
3. If you are the last one out of the room, close the door but do not lock it. Locking the door will slow down the fire department's search and rescue efforts.
4. When you are out of the building, report to the nearest rally point.

In addition, follow these safety precautions:

1. Do not use elevators.
2. Stay low to avoid smoke and toxic gases. The best air is close to the floor, so crawl if you have to.
3. If possible, cover your mouth and nose with a damp cloth to help you breathe.
4. Evacuate the building in a quick and orderly manner.
5. Stay calm.

8.2.4 IF YOU ARE TRAPPED IN A BURNING BUILDING

If you are trapped in a burning building, do the following:

1. Close all doors and seal cracks around doors and vents. Wet material works well.
2. Call 911, and report your exact location.
3. If possible, pull the nearest fire alarm to indicate that someone was at the location.

8.3 CIVIL DISTURBANCES

Civil disturbances may include riots, protests, strikes, and demonstrations, and may occur at or near the NHMFL. Most demonstrations are peaceful and staff should attempt to carry on business as normal as possible. However, if such an event occurs the key to remaining safe is to not get involved or approach the area of the disturbance.

8.3.1 IF THE DISTURBANCE IS ON SITE

If the disturbance is on-site or near the laboratory, stay inside your building. By exiting your building, you may encounter a dangerous situation. In addition:

1. If you see a disturbance at or near the NHMFL, or an unusual individual that should not be in or at the NHMFL, call the FSU police at 850-644-1234 and notify the Safety Department at 855-SAFEMAG (855-723-3624).
2. Stay inside, away from open doorways and windows.
3. If outside, go inside to a safe area.

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4. If you see an unusual individual and suspect that the person should not be in the area, call the FSU police at 644-1234 and notify the Safety Department at Safety Department at 855-SAFEMAG (855-723-3624).
5. If approached by hostile individuals, avoid physical and verbal confrontations.
6. Follow instructions from your supervisor, NHMFL and the FSU police and the Tallahassee police. If asked to evacuate the building, follow the evacuation plan and procedures for your building.
7. Make sure that you have your identification so that NHMFL personnel and the FSU police can ensure that you are an NHMFL employee, visitor, contractor, and user.

8.4 BOMB THREAT

8.4.1 RECOGNIZING A BOMB

You might suspect that an object is a bomb if it:

1. Does not belong.
2. Is unusual.
3. Is out of place.
4. Is an unexpected mail delivery.

8.4.2 IF YOU SUSPECT A BOMB

If you suspect that a bomb is present, do not attempt to move, disarm, or neutralize a suspected explosive device, and follow these steps:

1. Call 911 and give your name, group, location, and telephone number.
2. Notify the Safety Department at 855-SAFEMAG (855-723-3624).
3. Sound the fire alarm and evacuate the area following your building emergency evacuation plan (Appendix A).

Note: If calling from non-campus phone dial 644 and then the last four (4) digits of the number desired. If calling out of the local area dial 850, the prefix (ex. 644) and the last four (4) digits.

8.4.3 TELEPHONE BOMB THREAT

If you receive a telephone bomb threat, follow these steps:

1. Stay calm. Do not confront or challenge the caller in any manner.
2. Without alerting the caller, try to signal another person to call 911 and say there is a bomb threat.
3. Keep the caller on the line as long as possible.
4. Call 911 when the caller hangs up, if someone has not already done so and notify the Safety Department
5. If an alarm sounds, evacuate following the posted evacuation route for your area.
6. Document the conversation using the Bomb Threat Form (Appendix B).

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9.0 REVISIONS AND APPROVALS:

Revisions

Date	Revision #	Section	Description
03/05/07	1	Cover	Names changed to reflect current management
03/05/07	1	2.0	Removed section 3.1.3 (Policy) and reorganized the section
04/09/07	1	4.0	Addition of the identification badge policy
03/05/07		7.0	Reformatting of this section
03/20/07	1	7.1	Modification of the hurricane emergency response section
04/09/07	1	7.3	Addition of streets that will possibly flood
03/05/07	1	Throughout	Change of phone numbers
07/10/08	2	7.1.1	Addition of Form A
07/10/08	2	7.1.1	Addition of Pre storm checklist
11/05/09	3	3.0	Addition of Directors Office/Management & Administration responsibilities
11/05/09	3	7.1.1	Change Directors Office to Directors Office/Management & Administration
11/05/09	3	7.1.2	Addition of statement "contact NSF as required"
08/17/17	4	6.7	Removed, In the event of an emergency, handicapped personnel may use the elevators to exit the building, provided they are free from smoke and fire. Elevators are not to be used during a fire.
08/17/17	4	7.1.3	Removed, only essential personnel will remain at lab. Personnel who choose to stay at the Lab after the University has been closed do so at their own risk. The potential exists for dangerous conditions to be present.
08/17/17	4	Throughout	Update phone number and contacts. Removed redundant number. Reformatted text and other areas of document for consistency.
4/16/17	5	Throughout	Reformatted text and updated signatures/reviewer pages.
9/4/18	6	7.1	Removed LANL hotline. Added provide update to FSU Website. Added if employees will stay during storm to notify FSUPD for shelter location on Campus. Use email to communicate include non magnet.edu account.

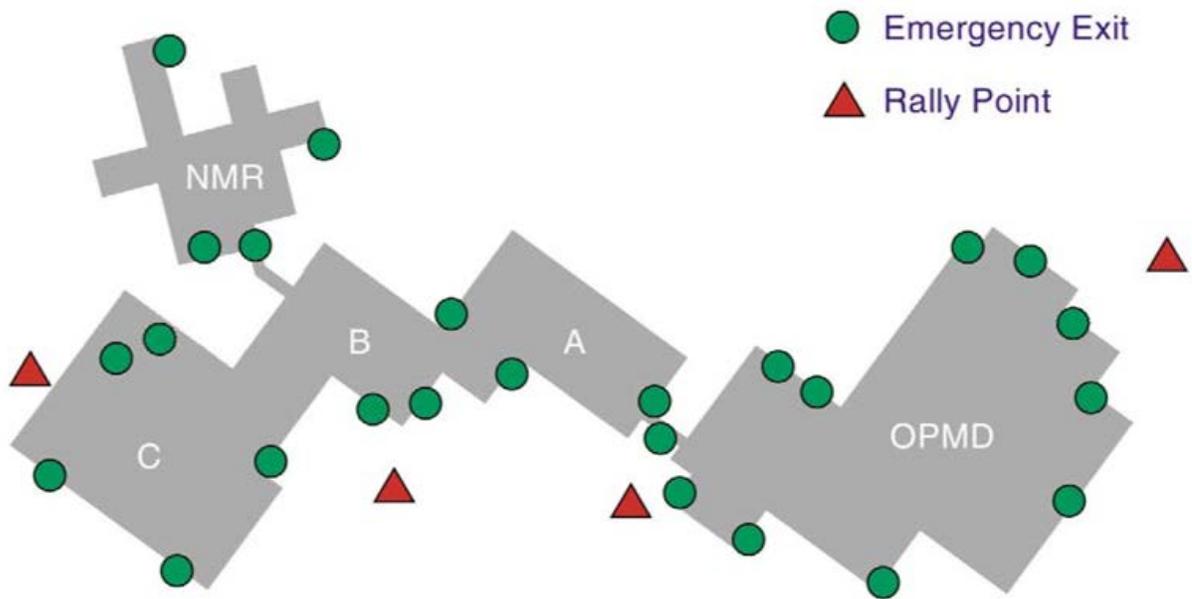
Approvals:

Title	Reviewer	Signature
Director: DC Field Facility		
Assistant Lab Director: DC Instrumentation/Operations		
Associate Director: Environmental Health & Safety		

APPENDICES

APPENDIX A

Diagram for Emergency Action Plan



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APPENDIX B

TELEPHONE BOMB THREAT FORM

INSTRUCTIONS

1. Be Calm. Be Courteous. Listen.
2. **Obtain information from the caller. Any person receiving a phone call in which the caller states that a bomb has been placed in any part of the facility should make every effort to obtain as much information as possible.**
3. Call the 911 and the NHMFL Safety Department. Without alerting the caller, try to signal another person to call Police at **911** and say there is a bomb threat. Then contact the NHMFL Safety Department at **4-0233, 5-3502 or 4-6955 (after hrs. 855-SAFEMAG, 855-723-3624)**.

If you are unable to signal another person wait until the caller hangs up and the call FSU Police and the NHMFL Safety Department.

QUESTIONS:

The following questions should be asked, if possible:

2. Where is the Bomb Located? _____
3. When is it set to explode? _____
4. What kind bomb is it? _____
5. What does it look like? _____
6. Why was the bomb placed? _____

OBSERVATIONS:

Caller's Identity: _____ Male _____ Female _____ Juvenile _____ Adult Approx. Age _____
Other Observations Noted: _____

ADDITIONAL INSTRUCTIONS:

After notifying FSU Police and NHMFL Safety Department of the threat, let them discuss the situation with the department head or other management source to determine if the immediate area should be evacuated.

DO NOT ALARM YOUR FELLOW COWORKERS UNNECESSARILY, WHICH COULD RESULT IN MASS HYSTERIA. DON'T PANIC AND DON'T SPREAD RUMORS.

Under no circumstance will any NHMFL employee, visitor, user, contractor attempt to move, disarm, or otherwise neutralize a suspected explosive device.