

**GUIDANCE FOR MANAGING  
THE RESPONSE TO  
CRITICAL INCIDENTS  
IMPACTING NIEHS FACILITIES**



**National Institute of Environmental Health Sciences  
National Institutes of Health  
U.S. Department of Health and Human Services**

**Research Triangle Park, North Carolina**

**April 2003**

*This Page Intentionally Blank*

<p><b>Interim Guidance for Managing the Response to Critical Incidents Impacting NIEHS Facilities</b></p>
---

	<u>Contents</u>	
Purpose		1
1. Critical Incidents		1
2. Incident Command and Decision-Making		2
3. Emergency Management Center		3
4. Incident Response Teams		3
a. Security		
b. Logistics		
c. Hazardous Material Responders		
d. Medical First Responders		
e. Utility Control Team		
f. Building Evacuation Team		
g. Incident Command Center		
5. Communications		5
a. External		
b. Internal		
6. Critical Incident Action Plans		6
Hazardous Material Release		7
Fire		11
Electrical Power Failure	15	
Explosion		19
Tornado		23
7. Supplemental Contingency and Action Plans		26
Evacuation Protocol		27
Shelter-in-Place Protocol		29
Emergency Contact Information		

*This Page Intentionally Blank*

## **Interim Guidance for Managing the Response to Critical Incidents Impacting NIEHS Facilities**

**Purpose:** The purpose of this Plan is to provide guidance for initiating and managing the initial response to critical incidents that may significantly impact NIEHS facilities and occupants. This Plan provides the structure for decision-making and the mobilization of resources within NIEHS to respond to campus-wide or regional emergencies and/or disasters. Specific contingency and action plans have been developed for a variety of emergency situations, for example, hazardous material release, fire, electrical power failure, civil disorder, and severe weather. As appropriate, these specific action plans and other contingency plans are to be used to guide response actions.

### **1. Critical Incidents**

A critical incident is an event or situation that threatens human life, health, or safety and requires swift, decisive action involving multiple components to protect lives and property.

Critical incidents occur outside the normal course of routine activities and include both natural events (tornadoes, floods, hurricanes) and man-made events (terrorist attack, explosion, bombing).

Emergency situations that would NOT be covered under the definition of “critical incidents” are those wherein the normal NIEHS resources are adequate to handle the incident (e.g., by NIEHS hazardous material or medical first responders). These events are limited and focused in their impact and generally would not trigger outside interest. Such events do not require evacuation of facilities other than the room or the immediate area and do not pose a threat to nearby persons or property. Examples of these emergencies include a minor personal injury, small or limited spill, an easily extinguished fire, or other minor emergencies.

## 2. Incident Command and Decision-Making

The NIEHS Director has the final discretionary authority for activation and deactivation of any part of the Plan. The Director has designated a chain of command to be followed in his absence or to be delegated at his request - 1. Deputy Director, 2. Associate Director for Management, 3. Scientific Director. Throughout the Plan, references to the Director/designee will refer to one of the above persons or their delegates.

At NIEHS, the response to impending or actual critical incident emergencies will be managed and coordinated through the Emergency Management Center (EMC) and Incident Response Teams.

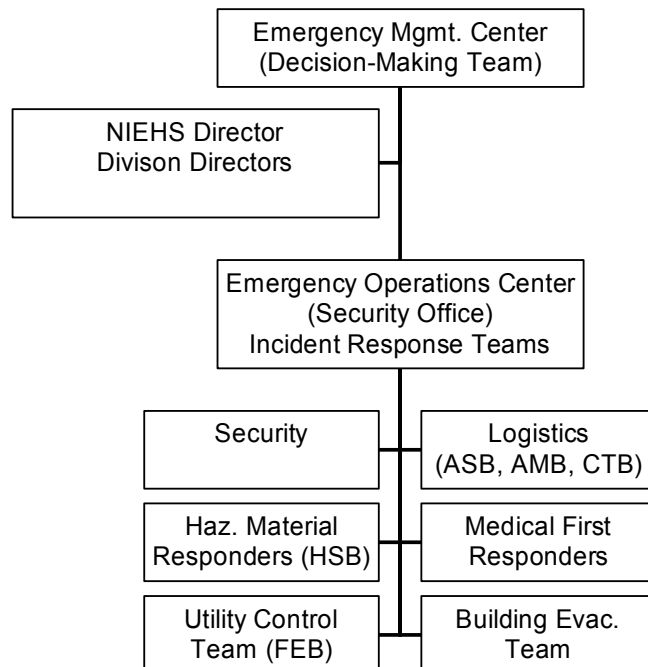
The Emergency Management Center will provide centralized assessment, decision-making, oversight, and support. It will serve as a center for both internal and external communications.

Incident Response Teams will provide an organized method to implement response actions and will coordinate response operations across teams.

The Associate Director of Management will assume the position of EMC Director. The Decision-Making Team of the EMC will include the following:

1. Associate Director for Management
2. Dep. Director, DIR
3. Chief, Facilities Engineering Branch
4. Chief, Health and Safety Branch
5. Other NIEHS officials, based on the situation.

As appropriate, the Decision-Making Team informs and solicits advice from the NIEHS Director, Division Directors, and Public Information Officer.



### **3. Emergency Management Center**

The EMC provides a centralized point for managing and coordinating the response to critical incidents. The EMC also serves as a center for both internal and external communications. The EMC will determine what services should be initiated, modified or discontinued, when and where staff or visitors should be relocated both within and outside of the Institute, and finally, when and to what extent other resources should be obtained.

The EMC shall be located in the Associate Director for Management's Office B250 and B200 conference room. If the primary site is rendered unusable, the alternate site for the EMC will be Building 102, Room S150, Facilities Engineering Branch

### **4. Incident Response Teams**

Depending on need and at the discretion of the EMC Director, Incident Response Teams may be activated for any potential or actual disaster in order to make assessments or take actions to minimize or control the effects of the disaster. These teams may also direct actions to initiate recovery efforts following a disaster or emergency.

#### **A. Security**

The Security Office (B101) will serve as the Emergency Operations Center for the implementation of response actions. It is also the control center for security personnel. Capabilities include:

- Monitoring control panels for security and fire detection systems
- Monitoring video camera displays of building exits and external campus areas
- Dispatching NIEHS emergency teams or calls for outside resources
- Making announcements on the NIEHS PA system

#### **B. Logistics**

Logistical teams will be formed based on the specific circumstances and impacts of the critical incident. These teams will provide support for specific logistical needs of response actions, such as to transport material or supplies, transfer EMC operations to an alternate location, establish temporary communication arrangements or communication recovery efforts, process procurements of urgently needed supplies or services, etc.

#### **C. Hazardous Material Responders**

Health and Safety Branch personnel are trained to undertake limited responses to contain and control hazardous material releases employing an Incident Command System approach. Various response equipment and personal protective clothing is maintained in constant readiness (e.g., self-contained breathing apparatus, respirators, direct reading air monitoring instrumentation, chemical resistive clothing).

#### **D. Medical First Responders**

Health and Safety Branch personnel and other Institute staff are trained to the Professional Rescuer level in CPR, First Aid, and AED. Equipment that is maintained and available includes emergency first aid trauma kits, medical oxygen, breathing assistive devices, and Automated External Defibrillators.

### **E. Utility Control Team**

Key building operations personnel of the Facilities Engineering Branch will be deployed to assist in response actions involving utility systems, including

- Fire suppression systems
- Air supply and exhaust systems
- Domestic water systems
- HTHW and Chilled water systems

### **F. Building Evacuation Team**

NIEHS employees have been identified to assume specific roles (on a voluntary basis) to assist in the orderly evacuation of NIEHS occupied buildings. Floor, Module, and Stairwell Monitors check their assigned areas to ensure all personnel have evacuated and guide occupants to safe exit paths. Aides may be pre-assigned to assist employees with special needs.

### **G. Incident Command Center**

For critical incidents that involve a fixed location, an Incident Command Center, if needed, will be located in a safe area near the event. The Incident Command Center will serve as a staging area for incident activities and a center of direct communication between the EMC and the site of the incident. The Institute will implement its ICS plan, including the assignment of an on-scene Incident Commander. The Incident Commander role will be relinquished to an Authority Having Jurisdiction (e.g., Fire Department or Law Enforcement agency) upon their arrival on the scene.



## 5. Communications

### A. External

Upon receipt of credible information that an impending threat condition may affect NIEHS and/or the Research Triangle Park region, the EMC will convene and immediately attempt to obtain confirmatory information and guidance from local emergency management agencies.

The RTP Emergency Notification System maintains a list of emergency contacts for all RTP companies. Durham County Emergency Management can send recorded emergency messages to RTP companies in the event of a regional emergency. To send an emergency notification messages, call 911 and request Durham County Emergency Management to be paged.

North Carolina Emergency Management Telephone and Radio directory information is attached and includes contact information for Durham, Wake, and Chatham counties.

During a crisis or internal disaster, members of the news media may contact NIEHS employees seeking information. All external communications with the news media will be coordinated through the EMC with support from the Office of Communications and Public Liaison (OCPL). The Institute Director, EMC Director or their designee, will make public statements regarding the status of the NIEHS during a crisis.

### B. Internal

In the event of an internal or external disaster, it is essential that employees and onsite contractor staff be kept informed about decisions or events that directly affect them.

Communications with NIEHS personnel during work hours will be accomplished by the following methods:

- All-hands email
- Public Address/Intercom (accessed at the Security Office)
  - All buildings on the Main Campus are currently connected to the PA system. Other off-site locations are not connected to the PA system.
- Security and other personnel dispatched to make announcements.

The primary method of informing off-duty and off-site institute staff concerning the status of NIEHS operations (i.e., facility closures and other access restrictions) is through the NIEHS Information Line 541-1919. A recorded emergency message can be available to employees by calling this number from a touch-tone phone or by calling 541-7916 from a rotary dial phone.

Off-site employees who are able to connect to the NIEHS network through remote access can also obtain information through the NIEHS web site and email system. However, remote access capabilities can only accommodate a limited number of simultaneous users.

## 6. Critical Incident Action Plans

This section presents action plans to guide the response to selected critical incidents during the initial crisis and consequence phases. Disaster situations were selected for development of action plans using a vulnerability analysis for the Main Campus and off-site leased facilities, based on the FEMA Emergency Management Guide for Business and Industry. The analysis considered event probability and the estimated potential impact on human health and safety, property, and the NIEHS research mission.

Action plans for the following disaster situations are currently being developed, with others to be added:

- Hazardous Material Release
- Fire
- Electrical Power Failure
- Explosion
- Tornado

### **Action Plan Considerations for Level RED Threat Conditions**

Should the Department of Homeland Security (DHS) increase the threat condition of the Homeland Security Advisory System (“Alert Levels”) to Red, the NIH will respond with heightened security precautions. Increased alert levels apply to all NIH campuses and facilities.

Level RED indicates that there is a “Severe risk of terrorist attacks” or that there has been an attack. A Level RED Threat Condition is not intended to be sustained for a substantial period of time. During the first 48 hours of a Level Red Threat Condition, the NIH senior level management will assess relevant threats and risks to make operational decisions regarding next steps.

Mission critical NIH functions and research will need to be maintained and protected during a Level RED Threat Condition. IC Directors have designated certain employees and contractors as “RED Alert Critical” personnel and access to NIH facilities will be limited to only those individuals designated “RED Alert Critical.”

The primary method of informing off-site institute staff concerning the status of NIEHS operations (i.e., cessation of Level RED access restrictions) is through the NIEHS Telephone Information Line, issuance of all hands email notifications, and group calling trees.

### **Introduction**

**PURPOSE:** This emergency action plan is designed to guide the initial assessment and decision-making in response to a release of hazardous material and to protect human health and safety and mission-critical functions. This plan may be activated in anticipation of, or in response to, a hazardous material release that may impact NIEHS activities and operations.

**SCOPE:** This action plan provides for a coordinated response to actual or potential releases of hazardous materials including:

- Chemical agents
- Biological agents or their toxins
- Radiological materials

This action plan covers hazardous material releases that:

- Are either accidental or intentional (e.g., acts of terrorism)
- Occur either onsite or offsite with potential migration to NIEHS (Main Campus or Leased Facilities).

### **Situation**

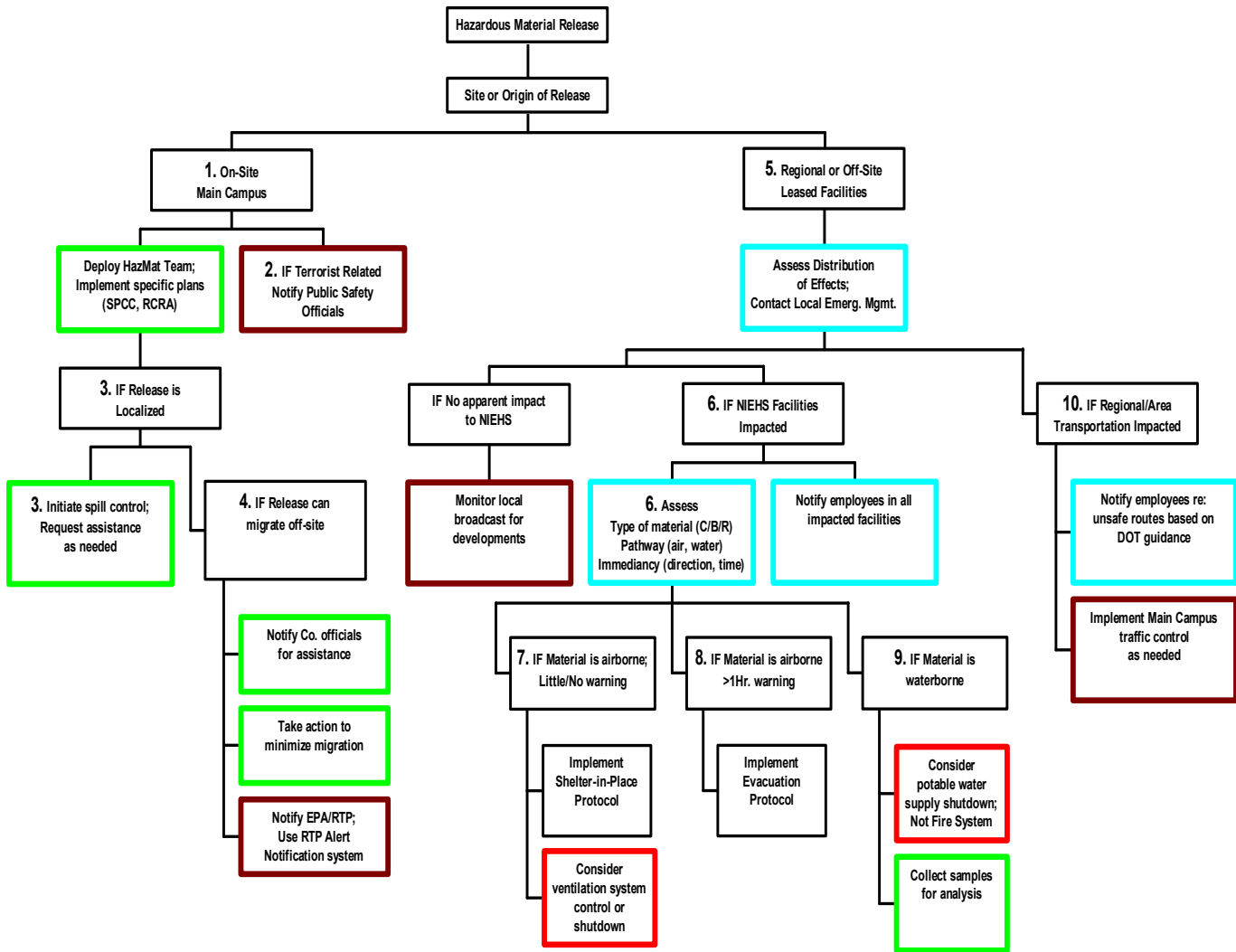
**DISASTER CONDITION:** A natural or other disaster could result in numerous situations in which hazardous materials are released into the environment. NIEHS research materials (chemicals, radioisotopes, and biological materials) are typically used in small quantities under controlled conditions. Support operations may involve the storage of materials in larger quantities; however such materials would typically be commercial products (e.g., water treatment chemicals) or materials with limited or well-established toxicity (e.g., No. 2 fuel oil). Other fixed facilities located in the RTP may use or store a wide variety of hazardous materials. Hazardous materials are transported near NIEHS on highways (e.g., Interstate 40) and railways. Acts of terrorism could be directed at RTP facilities.

### **PLANNING ASSUMPTIONS:**

1. Situations involving hazardous materials emergency response are generally handled at the local level.
2. Information and guidance will be available from County or State emergency management authorities regarding hazardous material releases that have regional impact.
3. There may be numerous incidents occurring simultaneously in separate locations.
4. Durham County may be overwhelmed by the extent of the response effort required to assess, mitigate, monitor, clean up, and dispose of hazardous materials released into the environment.
5. Assistance from the NC Regional Response Team #4 (Parkwood VFD) will be readily available for single events but could be significantly delayed for multiple, simultaneous events.
6. Facilities that become contaminated with certain hazardous agents (e.g., anthrax, ricin, etc.) will be closed until they are decontaminated.
7. NIEHS Hazardous Material response capability will be able to effectively handle small or moderate spill events that occur on the Main Campus.

**Critical Incident: Hazardous Material Release**

**Concept of Operations – Response Action Tree**  
(Numbers refer to supplemental text on the next pages)



Lead Role for Assessment and Implementation  
■ -- EMC    ■ -- HSB    ■ -- FEB    ■ -- Security

**11. Recovery**

Site Safety Assessment – Facility or area determined as safe” by the onsite HazMat Team (for localized incidents) and/or by local authorities (e.g., Durham Co. Emergency Management).

Decontamination– Completed and verified decontamination of impacted areas.

Impact Assessment – On-going science, science resources (e.g., animal facility functions), facility systems (e.g., ventilation, heating/cooling, water, electrical, etc.)

Communication with employees regarding facility operational status – PA announcement, Recorded message line, Email – All Hands, Intranet posting, Telephone call tree.

Documentation of actions – Notification to local agencies, Isolation of crime scene for evidence (terrorist related incidents), Incident evaluation and debriefing.

## Critical Incident: **Hazardous Material Release**

### Site or Origin of Release

1. IF Release occurs onsite - Main Campus, THEN
  - (a) HSB -- Deploy Internal HazMat Team for initial assessment (Incident Command System Plan), and
  - (b) HSB -- Implement site-specific plans (SPCC Plan for petroleum products; RCRA Contingency Plan for hazardous waste).
2. IF Terrorist related event, THEN
  - (a) Security -- Notify Public safety / Law enforcement officials.
3. IF Release is localized THEN
  - (a) HSB -- Initiate response action for spill control and clean up, and
  - (b) HSB -- Request local resources for assistance, if needed (NC Regional Response Team #4, Emergency Medical Services, etc).
4. IF Release has potential for off-site impact or migration THEN
  - (a) HSB -- Request assistance from Durham Co. Emergency Management,
  - (b) HSB (assisted by FEB, as appropriate) -- Take control action to minimize or retard migration, and
  - (c) Security -- Notify EPA-RTP and/or initiate RTP Emergency Alert Notification System.
5. IF Release impact is Regional, or involves off-site – Leased Facilities THEN
  - (a) EMC -- Contact Durham Co. Emergency Management Services for information and guidance
  - (b) Security/EMC -- Monitor local broadcasts for developments.

### Distribution of Effects

6. IF NIEHS Facilities will be impacted THEN
  - (a) EMC -- Follow instructions of Local / State officials (e.g., evacuation, shelter-in-place, etc.),
  - (b) EMC/FEB/Security -- Notify employees in all impacted facilities, and
  - (c) EMC -- Assess the following:

Type/Identity of Material:	Chemical; Biological; Radiological
Pathway:	Airborne; Waterborne contaminant
Immediacy:	Probable direction and time of travel

*Note: In the absence of clear, unambiguous instructions from local emergency management officials, quick and cautious judgments will need to consider possible contaminant toxicity, the potential for a dispersed contaminant to reach NIEHS facilities in sufficient concentration to be harmful, weather conditions (temperature and wind speed) and other relevant factors.*

7. IF material is airborne with little or no warning time THEN
  - (a) Implement Shelter-In-Place Protocol,
  - (b) FEB -- Consider specific control actions or shutdown of ventilation systems.
8. IF material is airborne with > 1-hour warning THEN
  - (a) Implement Evacuation Protocol
9. IF material is waterborne THEN
  - (a) FEB -- Consider shutdown of domestic, potable water supply – Do not shutdown fire protection systems,
  - (b) HSB -- Collect samples for possible analysis
10. IF Area or Regional Transportation is affected THEN
  - (a) FEB/Security -- Notify employees of safe / unsafe routes based on DOT guidance and instructions and

(b) Security -- Restrict NIEHS traffic exits and direct Main Campus traffic, as appropriate.

**Critical Incident: Hazardous Material Release**

**11. Recovery** - The following items must be evaluated and completed before returning to normal operations. The scope and extent of recovery operations will be consistent with the overall magnitude of the hazardous material release.

Site Safety Assessment – Generally the facility or area will not be considered “safe” until determined as such by the onsite HazMat Team (for localized incidents) and/or by local authorities (e.g., Durham Co. Emergency Management).

Decontamination – Specific areas may need to remain shutdown until decontamination has been completed and verified.

Impact Assessment – On-going science, science resources (e.g., animal facility functions), facility systems (e.g., ventilation, heating/cooling, water, electrical, etc.)

Communication with employees regarding facility operational status – PA announcement, Recorded message line, Email – All Hands, Intranet posting, Telephone call tree.

Documentation of actions – Notification to local agencies, Isolation of crime scene for evidence (terrorist related incidents), Incident evaluation and debriefing.

### **Introduction**

**PURPOSE:** This emergency action plan is designed to guide the initial assessment and decision-making concerning a fire or explosion incident occurring at the NIEHS main campus or any leased facility. The plan addresses immediate coordination needs and possible remediation/recovery efforts and responses.

**SCOPE:** This action plan provides for a coordinated response in the aftermath of a fire or fire related explosion occurring on or off the NIEHS main campus that involves local fire department response.

This plan covers events that:

- Are either accidental or intentional (e.g., acts of terrorism)
- Are of sufficient intensity to cause serious personal injury or significantly affect on-going operations. This plan would not be invoked for minor incidents that are entirely contained within a laboratory (e.g., lab hood) or similar enclosure and require no external response for fire or injury.

### **Situation**

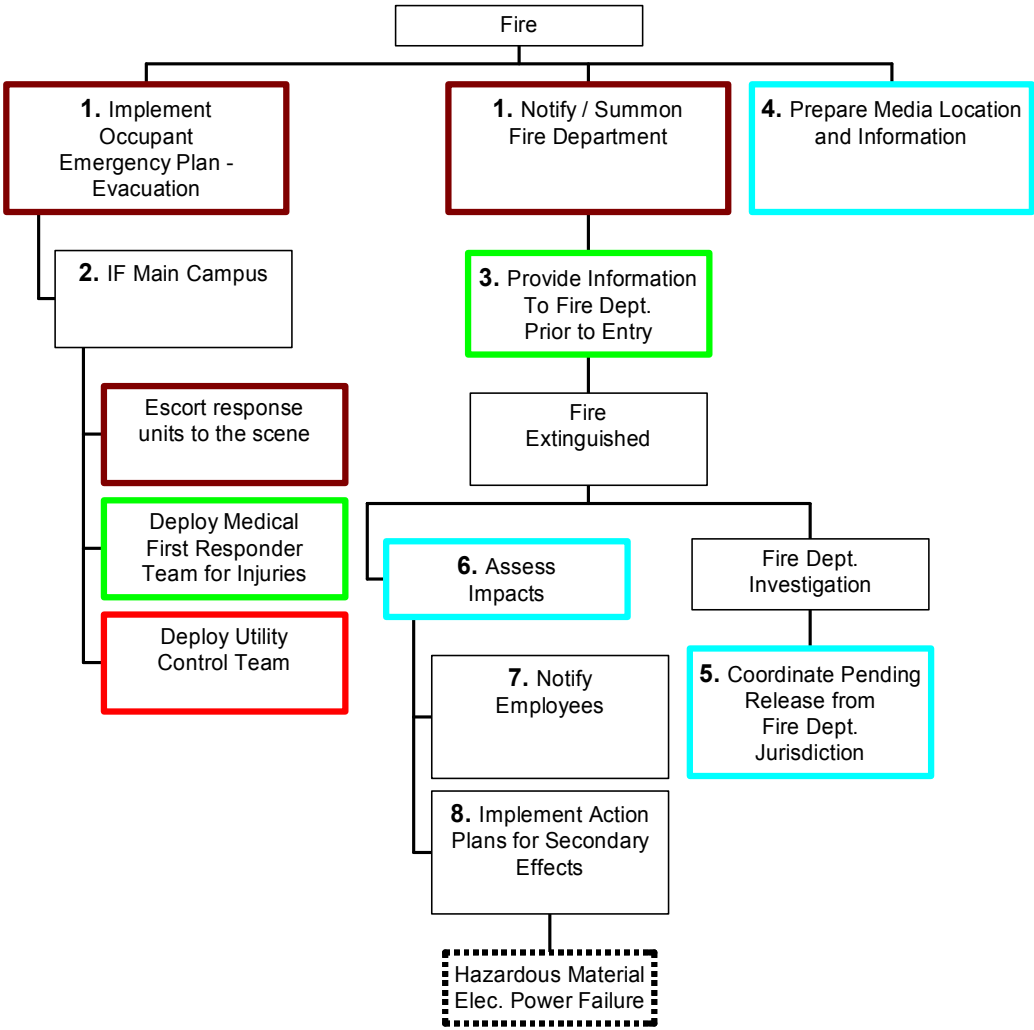
**DISASTER CONDITION:** Fire can result from many scenarios: i.e., a trash can fire; an electrical fire; a flammable liquid spill ignited by an arc or spark; or an activist group using an incendiary device. Fires can be smoldering, flaming and/or explosive in nature. A fire or explosion can have the potential for causing multiple casualties and severe property damage. Portable fire extinguishers and/or the fire sprinkler system will generally confine such devastating effects to a single room or lab but fire may spread throughout a building. Within NIEHS laboratories, the presence of chemicals (e.g., flammable solvents) and compressed gas cylinders could significantly exacerbate the spread of fire and products of combustion (e.g., smoke and fire gases). A fire involving the NIEHS Building 107 electrical transformers could result in partial or total loss of primary electrical power to the Institute. Acts of terrorism involving incendiary devices could be directed at NIEHS facilities.

### **PLANNING ASSUMPTIONS:**

1. Fire sprinklers are an active form of fire protection – they provide fire suppression or control in addition to automatically activating the fire alarm system. All main campus buildings have fire sprinklers with the exception of portions of Modules A and B. Nottingham Hall and Davis Park Warehouse also has sprinklers but the 4401 Building does not.
2. The local fire department will be immediately summoned and will coordinate and take control of the crisis phase of a fire or explosion incident. They may rely on information provided by NIEHS prior to entering a burning laboratory building.
3. The NIEHS Emergency Organization will respond during the evacuation. The organization includes management, security personnel, building evacuation team, medical first responder team and utility control team.
4. Local media will be present shortly following the incident.

### Concept of Operations – Response Action Tree

(Numbers refer to supplemental text on the next page)



Lead Role for Assessment and Implementation

EMC -- EMC      HSB -- HSB      FEB -- FEB      Security -- Security



**Crisis Response**

1. IF Fire occurs impacting NIEHS facilities THEN

- (a) Security – Request 911 assistance for fire, injury, etc.
- (b) Security – Immediately activate the NIEHS Emergency Organization.
- (c) Building Evacuation Team – Verify occupant evacuation.

IF Terrorist related event THEN

- (a) Security – Notify Public safety / Law enforcement officials.

2. IF Fire occurs on NIEHS Main Campus THEN

- (a) Security – Escort rescuers to the scene of the incident.
- (b) HSB – Deploy Medical First Responder Team for injuries.
- (c) FEB – Deploy Utility Control Team to shut off utilities (natural gas, propane, electrical, etc.) at main supply depending on need and safety considerations.

3. HSB – Assist FD with any questions about possible cause of fire, need for rescue, and/or materials or chemicals that may be involved.

**Consequence Management and Recovery**

4. EMC – Coordinate with Office of Communications and Public Liaison to prepare information for media inquiries and identification of NIEHS Spokesperson. Arrange for access to identified media location.

5. EMC – Coordinate with FD and Fire Marshal personnel as they investigate the cause of the fire and assess the impact to the facility. Assess impacts of the fire including extent of damage, structural integrity of building areas, operational status of utility systems and safety of recovery actions to retrieve research material(s).

6. EMC – Based on assessment:

7. Communicate with employees in affected areas information and instructions concerning operational status of facility.

8. Implement other action plans, as appropriate, to address secondary effects such as electrical power failure and/or hazardous material release. Consider the need to mitigate possible environmental effects caused by the incident and response actions (e.g., fire fighting).

*This Page Intentionally Blank*

### **Introduction**

**PURPOSE:** This emergency action plan is designed to guide the initial assessment and decision-making in response to a loss of normal and/or emergency electrical power. This plan may be activated in response to loss of electrical power to protect human health and safety and maintain mission-critical functions.

**SCOPE:** This action plan provides for a coordinated response to a loss of electrical power as a result of:

- Natural disasters such as hurricane, tornado, ice storm, etc.
- Terrorist attack on generating source
- Failure of Duke Power generating equipment
- Failure of the distribution grid on campus or at off-site facilities

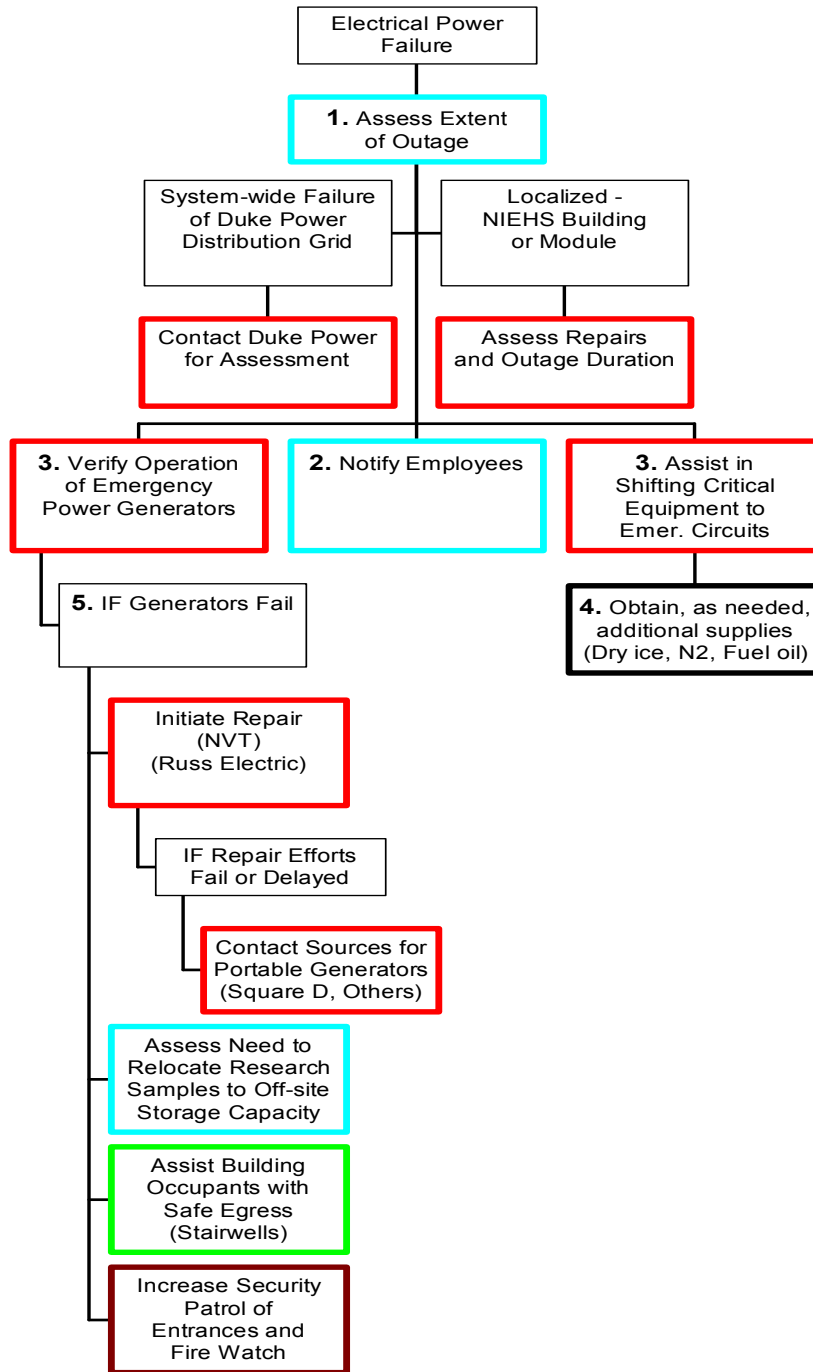
### **Situation**

**DISASTER CONDITION:** Various scenarios could be envisioned that could result in the NIEHS being without its primary (Duke Power) and/or secondary (emergency generators) power supply systems. Under normal conditions, it is unlikely that the NIEHS would experience a total loss of electrical power, since the Duke Power supplies 110 KV power from two locations, our in-coming switchgear building includes redundancies that provide maximum flexibility if a piece of equipment should fail, and NVT provides regular preventive maintenance and exercising of emergency generators. One scenario would be a natural disaster that resulted in distribution lines being taken down (ice, high winds, etc.) thereby severing normal power from the NIEHS and/or its off-site facilities. In this situation, the on-campus emergency generators would be activated and the emergency circuit would be “powered”. A second scenario would involve the same loss of distribution capability, but would be further exacerbated by a failure of one or more of the emergency generators. A third scenario would include Duke Power generating equipment being rendered inoperable by terrorist attack or an operational failure of the equipment. A fourth scenario would be the failure of one or more of our 13.5 KV underground cables that could impact all or a portion of the campus.

### **PLANNING ASSUMPTIONS:**

1. Problems associated with the distribution of electrical power on our campus are the responsibility of the NIEHS.
2. Information and professional guidance are available within the NIEHS engineering professionals, from the NIH Division of Engineering Services and with long-standing agreements with Duke Power.
3. The “disaster” is multi-faceted such that safeguards and built-in redundancies are not sufficient to maintain business as usual.
4. A single prong event would not “put the NIEHS out of business”
5. When limited to emergency power, sub-critical research/administrative functions will be reduced/eliminated until normal power is restored.
6. Durham County may not be a source of relief due to overwhelming requirements.
7. NIEHS engineering staff may be able to effectively provide the response necessary to effectively handle problems on the Main Campus. Lessor(s) will be relied upon to handle problems at leased facilities

**Concept of Operations – Response Action Tree**  
 (Numbers refer to supplemental text on the next page)



■ -- EMC    
 ■ -- HSB    
 ■ -- FEB    
 ■ -- Security    
 ■ -- ASB, AMB

### **Incident Assessment**

**1. IF Electrical power failure occurs THEN**

- (a) EMC – Assess extent and probable duration of outage
- (b) FEB – Contact Duke Power for system-wide disruptions of electrical service
- (c) FEB – Contact building management representative for off-site leased facilities
- (d) FEB – Conduct equipment inspection for damage to Main-campus electrical distribution system.

**2. EMC – Communicate information and instructions to employees concerning operational status of facility.**

### **Consequence Management**

**3. IF Main Campus electrical power fails THEN**

- (a) FEB – Verify operational status of emergency electrical power generators (Building 101 -C Module and F Module, Building 102, Building 105, Building 108)
- (b) FEB / HSB – Provide assistance in shifting critical equipment (e.g., freezers) to emergency power circuits.

**4. Logistics Team (ASB, AMB) – Determine inventory status and, as necessary, obtain/procure additional supplies of Liquid Nitrogen, dry ice, and No. 2 fuel oil.**

**5. IF Emergency generators fail THEN**

- (a) FEB – Initiate repair efforts by NVT and/or Outside vendors (Russ Electric)
- (b) FEB – Contact sources (e.g., Square D) and arrange for portable generators if repair efforts fail or will be significantly delayed.
- (c) EMC / DIR – Assess need and arrangements for temporary relocation of critical research samples to off-site storage locations (e.g., NTP /DIR Repository).
- (d) HSB – Assist building occupants with safe egress from building (portable illumination of stairwells; identify needs and assist individuals with mobility disabilities, etc.)
- (e) Security – Increase security patrol of building entrances and Fire Watch.

***This Page Intentionally Blank***

### **Introduction**

**PURPOSE:** This emergency action plan is designed to guide the initial assessment and decision-making in response to an explosion occurring within or in proximity to NIEHS facilities.

**SCOPE:** This action plan provides for a coordinated response to the immediate consequences in the aftermath of an explosion incident that impacts the Main Campus or off-site leased facilities. Community emergency resources will be immediately summoned to address the crisis phase of an explosion incident (fire, medical, public safety).

The plan covers events that:

- Are either accidental or intentional (e.g., acts of terrorism)
- Are of sufficient intensity to cause serious personal injury or significantly affect on-going operations. This plan would not be invoked for minor incidents that are entirely contained within a laboratory (e.g., lab hood) or similar enclosure and require no external response for fire or injury.

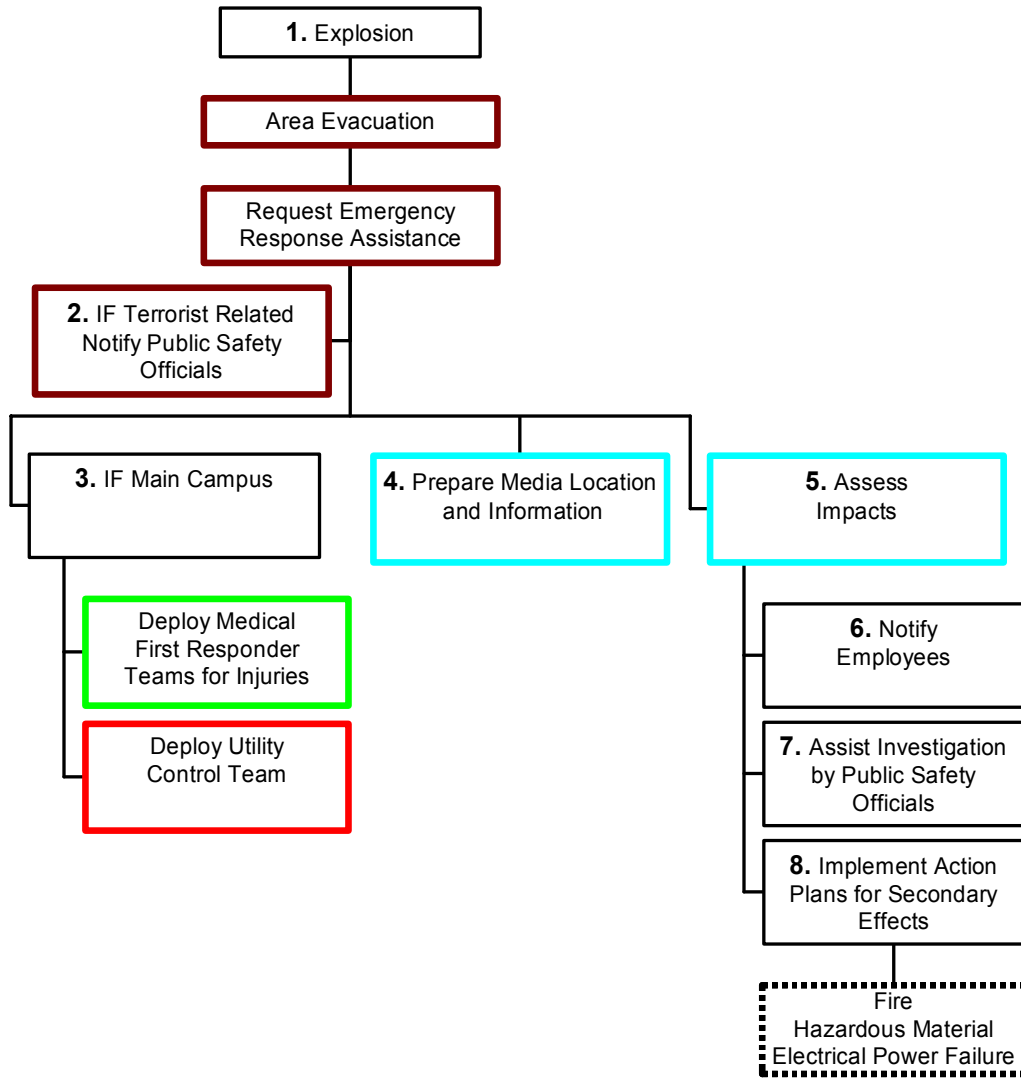
### **Situation**

**DISASTER CONDITION:** An explosion can have the potential for causing multiple casualties and severe property damage. Such devastating effects will generally be localized with broader secondary impacts resulting from possible fire and/or hazardous material releases associated with the blast. Within NIEHS laboratories, the presence of chemicals (e.g., flammable solvents) and compressed gas cylinders could significantly exacerbate these secondary effects. The Institute is provided natural gas service, which is used as a principal fuel at the Main Campus facility support complex (Buildings 105, 106, 108). Off-site leased facilities may also use natural gas for comfort heating. Propane gas is piped to various laboratories as a research utility and is provided from storage tanks located approximately 100 feet from the Building 101 main research facility. An explosion involving the NIEHS Building 107 electrical transformers could result in partial or total loss of primary electrical power to the Institute. Acts of terrorism involving explosive devices could be directed at NIEHS facilities, including letter, package, or vehicle bombs.

### **PLANNING ASSUMPTIONS:**

1. Local emergency response agencies will be immediately summoned and will coordinate and take control of the crisis phase of an explosion incident.
2. An explosion incident will involve other emergency situations (e.g., fire, injury, and hazardous material release) that could precede or follow the explosion.
3. Local media will be present shortly following the incident.

### Concept of Operations – Response Action Tree (Numbers refer to supplemental text on the next page)



Lead Role for Assessment and Implementation

■ -- EMC      ■ -- HSB      ■ -- FEB      ■ -- Security



**Crisis Response**

1. IF Explosion occurs impacting NIEHS facilities THEN
  - (a) Security – Immediately evacuate building and adjacent areas
  - (b) Building Evacuation Team – Verify occupant evacuation
  - (c) Security – Request 911 assistance for fire, injury, etc.
  
2. IF Terrorist related event, THEN
  - (a) Security – Notify Public safety / Law enforcement officials.
  
3. IF Explosion occurs on NIEHS Main Campus THEN
  - (a) HSB – Deploy Medical First Responder Team for injuries
  - (b) FEB – Deploy Utilities Control Team to shut off utilities (natural gas, propane, electrical, etc.) at main supply depending on need and safety considerations

**Consequence Management and Recovery**

4. EMC – Coordinate with Office of Communications – Public Liaison to identify a safe location for media, prepare information for media inquiries, and selection of NIEHS Spokesperson.
  
5. EMC – Assess impacts of the explosion incident including extent of damage, structural integrity of building areas, operational status of utility systems, safety of recovery actions to retrieve research material(s). Coordinate with on-scene response agencies for assessments.
  6. Based on assessment, communicate to employees in affected areas information and instructions concerning operational status of facility.
  
  7. Assist Public Safety Officials in their investigation. If Public Safety agencies exercise jurisdiction over the site, coordinate with officials to determine when jurisdiction will be released to NIEHS for initiation of recovery and remediation activities.
  
  8. Implement other action plans, as appropriate, to address secondary effects such as fire, electrical power failure, and/or hazardous material release. Consider the need to mitigate possible environmental effects caused by the incident and response actions (e.g., fire fighting).

***This Page Intentionally Blank***

### **Introduction**

**PURPOSE:** This emergency action plan is designed to guide the initial assessment and decision-making in response to a severe weather condition involving the potential for tornado formation. This plan may be activated in response to a notification that conditions are such that tornadoes could develop or traverse the Durham County, Research Triangle Park region.

**SCOPE:** This action plan provides for a coordinated response to the potential or imminent formation of a tornado and associated severe weather conditions of damaging wind and hail that could affect the NIEHS Main Campus and off-site leased facilities.

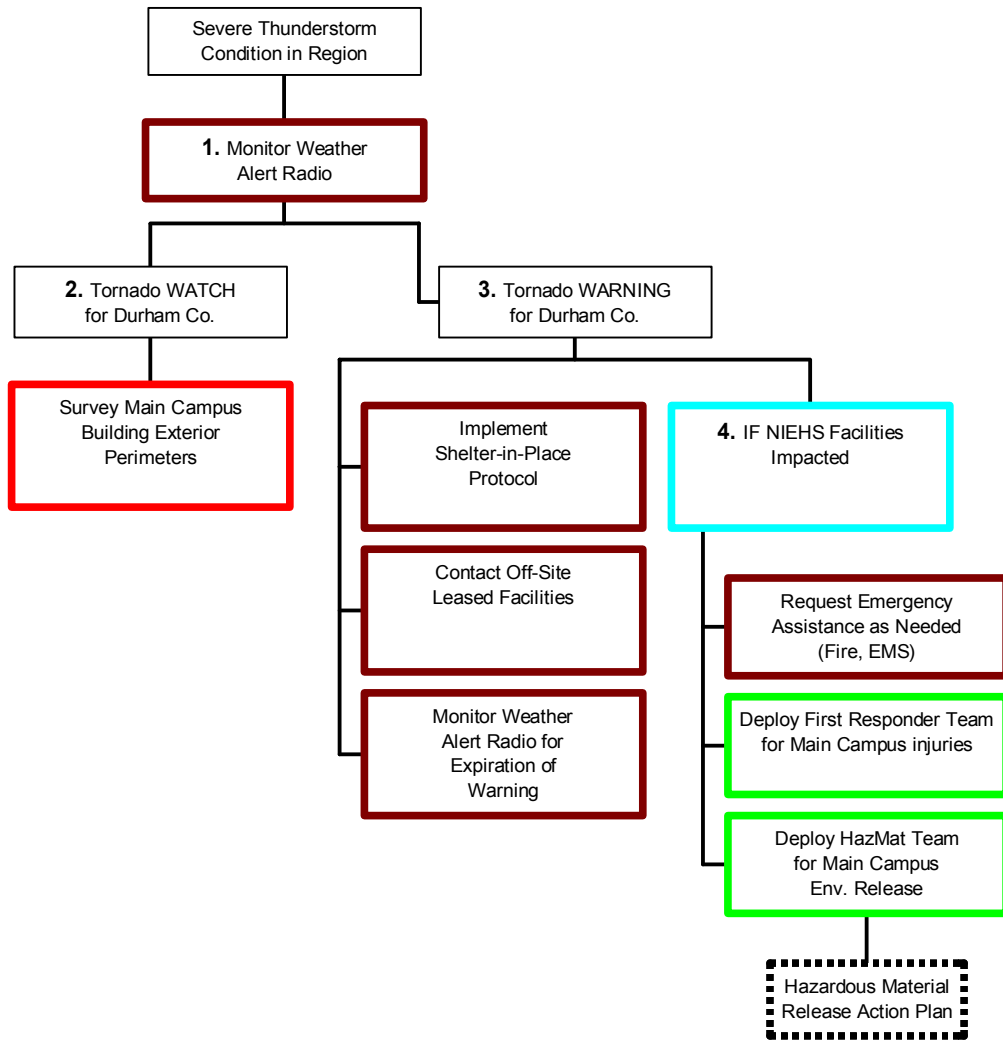
### **Situation**

**DISASTER CONDITION:** The entire State is vulnerable to the effects of tornadoes, and other severe weather associated with thunderstorms including damaging winds, hail, dangerous lightning and flooding. Tornadoes can occur virtually any time of the year. However, North Carolina's greatest tornado threat runs from late February through early June. Localized winds may exceed 100 mph for limited periods of time. NIEHS has weather alert radios that are monitored by Security and other individuals in FEB and HSB when thunderstorms are in the area.

#### **PLANNING ASSUMPTIONS:**

1. The National Weather Service will issue alerts for the Durham/Chatham/Wake counties concerning the potential for tornado formation from severe thunderstorms in the area.
2. The threat of tornado may occur at any time; several tornadoes may be formed from a passing weather system.
3. The precise movement and intensity of a tornado is unpredictable. A severe weather alert will apply equally to all NIEHS Main Campus and off-site leased facilities.
4. Damage from a tornado incident could occur at multiple locations in the RTP area and could overwhelm the ability of County emergency resources to immediately respond to all areas of need.

**Concept of Operations – Response Action Tree**  
 (Numbers refer to supplemental text on the next page)



Lead Role for Assessment and Implementation  
■ -- EMC    ■ -- HSB    ■ -- FEB    ■ -- Security

**5. Recovery**

Site Safety Assessment – Facility or area surveyed for damage and hazardous conditions.

Restoration – Areas restricted for debris removal.

Communication with employees regarding facility operational status – PA announcement, Recorded message line, Email – All Hands, Intranet posting, Telephone call tree.

Impact Assessment – On-going science, science resources (e.g., animal facility functions), facility systems (e.g., ventilation, heating/cooling, water, electrical, etc.)

### **Alert Notification**

1. IF potential for severe thunderstorm activity in area THEN
  - (a) Security – Monitors Weather Alert Radios for National Weather Service alerts.
  
2. IF Tornado Watch condition is issued THEN
  - (a) FEB / Security – Conduct survey of exterior perimeter of Main Campus buildings and secure or remove equipment or other items (e.g., table umbrellas) that could become projectiles.
  
3. IF Tornado Warning condition is issued for Durham County THEN
  - (a) Implement Shelter-in-Place Protocol, including PA announcement to Main Campus employees and on-site contractors.
  - (b) Security – Contact Off-site leased facilities
  - (c) Security – Continue to monitor Weather Alert Radio for expiration of Tornado Warning condition and issue all clear message on PA and to off-site leased facilities.

### **Consequence Management**

4. IF NIEHS Facilities impacted THEN
  - (a) Security – Request assistance for emergency conditions (Fire Department, EMS, etc)
  - (b) HSB – Medical First Responder Team for Main Campus injuries.
  - (c) HSB – HazMat Team for Main Campus environmental releases (Hazardous Material Release Action Plan)

### **Recovery**

5. The following items must be evaluated and completed before returning to normal operations.

Site Safety Assessment – The facility or area will be surveyed for damage and other hazardous conditions (e.g., broken glass, debris).

Restoration – Specific areas may need to be restricted until debris removal has been completed.

Communication with employees regarding facility operational status – PA announcement, Recorded message line, Email – All Hands, Intranet posting, Telephone call tree.

Impact Assessment – On-going science, science resources (e.g., animal facility functions), facility systems (e.g., ventilation, heating/cooling, water, electrical, etc.)

## 7. Supplemental Contingency and Action Plans

Depending on the nature of the critical incident and the assessment of its potential impact, the following contingency and emergency plans may be implemented:

Dispatcher's Action Plan - Provides instructions, contacts and telephone numbers to be used by NIEHS Security personnel when they are notified of a potential emergency situation.

Occupant Emergency Plan - Describes the actions to be taken by employees during emergency situations. The specific focus of this document is on the efficient evacuation of personnel from NIEHS facilities and the organization of emergency response responsibilities.

NIEHS Incident Command System - Identifies the process, roles and responsibilities for on-site responses to hazardous material releases. This system is intended for significant releases that potentially require coordinated efforts and specialized personal protection. The ICS also provides a decision process to determine if response actions are beyond on-site capabilities and external assistance is needed.

Animal Facility Disaster Plan – Describes the procedures to be used to respond to various emergency situations involving the NIEHS animal facility operations.

Hazardous Waste RCRA Contingency Plan - Discusses the emergency response procedures and available equipment/supplies to be used for spills or releases of hazardous waste. The primary focus of this plan is on waste management activities at the Institute's waste storage facility (Bldg. 108) and Incinerators (Bldg. 106). This plan is required under the Resource Conservation and Recovery Act for facilities treating, storing or disposing of regulated hazardous waste.

Spill Prevention, Control and Countermeasure Plan - Describes the actions to be taken and available equipment/supplies to be used for spills or releases to the environment of stored oil and petroleum fuels (i.e., above and below ground storage tanks). The plan details the responsibilities of various NIEHS organizations involved in the handling, spill response, and cleanup of any fuel product. This plan is required under U.S. Environmental Protection Agency regulations.

NIEHS Safety and Health Manual and Radiation Safety Guide - Contains Institute policies, procedures and instructions on employee safety and health. These manuals have sections dealing with emergency procedures. These manuals are generally applicable to all NIEHS work situations, with particular emphasis on laboratory hazards.

Bomb Threat Plan - Contains procedures to be followed by employees and management officials when a telephone bomb threat is received. Key elements of this plan are included in the Occupant Emergency Plan.

## Evacuation Protocol

A disaster of any nature may cause all or part of the NIEHS facilities to close. The Institute Director, Deputy Director and the Associate Director for Management have the authority to order official closure of the NIEHS. A decision to officially close the NIEHS or a portion of the NIEHS campus will depend upon the specific circumstances of the pending or actual disaster. Some staff may be deemed to be critical or essential to the operation of the Institute (e.g., critical animal care functions). Such individuals should be kept informed on an annual basis of their status as a critical or essential employee.

It should be noted that the Authority Having Jurisdiction (e.g. Sheriff Department or other law enforcement authority) could order evacuation of all or part of the Research Triangle Park or Durham County.

Upon reaching a decision to evacuate NIEHS facilities, the following steps are taken:

	If a regional or RTP-wide evacuation is anticipated, contact local authorities for information concerning unsafe / unusable routes and advisability of using staged evacuation procedures.
	Prepare announcement (see attached for suggested message statements)
	Depending on the amount of time available before evacuation, implement appropriate procedures for orderly shutdown of NIEHS operations.
	Dispatch Security officers to Main Gate (assist in traffic control) Hopson Road gate (open; assist in traffic control)
	Provide written copy of announcement to Security officers at East Campus and Nottingham Hall.  Initiate procedures for communication with other off-site NIEHS locations (e.g., telephone notification)
	Announce evacuation instructions using PA System and issue All-Hands email Repeat PA announcement
	Sound Alarm
	Coordinate with Building Evacuation Team. Verify employees with special needs are evacuated.

## NIEHS Evacuation Message Statements

A state of emergency has been declared for the [NIEHS campus, RTP area, etc] due to [factual statement of the potential danger or threat]

For your safety, a decision has been made to close the Institute and to evacuate all employees [in the area, from Building 101, etc.].

At the sound of the alarm, you should gather your personal belongings,  
[turn off all nonessential equipment]  
[lower the sash on all lab hoods]  
[close lab and office doors]  
and exit the building.

[Include local authority evacuation instructions / information, as available]

The Institute will remain closed until [ time ]

At this time, we do not know when [Building; the Institute] will reopen. A message announcing when it is safe to return to work will be recorded on the NIEHS Information Line – 541-1919.

[For regional emergencies] You are advised to monitor local radio and television broadcasts for further information and instructions.



## Shelter-In-Place Protocol

In the event of a critical incident where hazardous (including chemical, biological or radiological) materials may have been released into the atmosphere either accidentally or intentionally, a decision to shelter-in-place may be the preferred method of safely waiting out the release. Shelter-in-Place means to seek immediate shelter and remain there rather than evacuate the area, and the decision to shelter-in-place is usually recommended by local emergency management officials when evacuation will subject persons to greater risk. In-place sheltering generally only lasts on the order of hours, not days.

Areas that could be considered for shelter-in-place locations include (a) all interior building spaces away from windows, (b) Building 101-B main conference center, and (c) Building 101 F-module interstitial spaces.

Upon reaching a decision to shelter-in-place at the NIEHS facilities, the following steps are taken:

	Upon identification of a regional or RTP-wide critical incident, contact local authorities for information concerning their recommendations regarding evacuation versus sheltering-in-place.
	Pass the alert rapidly to key personnel to activate the shelter-in-place plan, including off-campus sites (4401 Building, Nottingham Hall, Davis Park and FEELC)
	Implement shutdown or change to 100% recirculation of all HVAC equipment
	Prepare statement for announcement (see attached for suggested message topics)
	Provide written copy of announcement to Security officers at 4401 Building and Nottingham Hall  Initiate procedures for communication with other off-site NIEHS locations (e.g., telephone notification)
	Announce shelter-in-place instructions using PA System and issue All-Hands email  Repeat PA announcement
	Monitor Emergency Alert System through television or radio for further information and guidance
	Wait for all clear signal from the Authorities Having Jurisdiction

## NIEHS Shelter-in-Place Message Statements

A state of emergency has been declared for [NIEHS campus, RTP area, etc] due to [factual statement of the potential danger or threat]

For your safety, a decision has been made to implement the Institute's shelter-in-place plan for all employees [in the area, from Building 101, etc.].

At the end of this announcement you should immediately assure that equipment is secure (i.e., shut off gas, water, high voltage, etc.) and move to the nearest place of safety as far away from windows as possible, such as an interior room.

[Include local authority instructions / information, as available]

At this time, we do not know how long the state of emergency will last. Remain in safe locations until an all-clear message is announced.