Louisiana State University and Agricultural & Mechanical College

LSU Agriculture Center

Incident Response Plan Research Facilities

Louisiana State University & LSU AgCenter

February 2015 revision

Incidents, Injuries, Releases

NOTE: The NIH Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines) states that *"...any significant problems, violations of the NIH Guidelines, or any significant research-related accidents and illnesses"* **must be reported to NIH OBA within 30 days**. Certain types of incidents must be reported on a more expedited basis. Spills or accidents in BL2 laboratories resulting in an overt exposure must be immediately reported to NIH OBA. Spills or accidents occurring in high containment (BL3) laboratories resulting in an overt or potential exposure must be immediately reported to NIH OBA. Submit information to LSU EHS using the Incident Reporting Form link on EHS website, or contact EHS at 578-5640

Important Considerations for all Responses to Incidents:

- **Personnel safety and health**
  In all cases of incident response, personnel safety and health will be the most important consideration. Appropriate personal protective equipment shall be worn by response personnel. The Emergency Operations Center (EOC) shall be utilized in significant response actions. Implementation of the EOC shall be made by the senior response agency as appropriate for the situation.

- **Containment**
  In all emergency response cases, the containment of the biohazard materials is a key consideration. If there is time, and it is safe to do so, the PI (or designee) may remove biohazards from the danger area, and safeguard them until the emergency is over. Under such circumstances, proper expedient safeguards shall be used to protect personnel, and the agents shall be safeguarded.

- **Inventory control**
  Inventories shall be checked against the last known inventory after the emergency is over, where the lab or storage location is involved in the emergency, or there is evidence that unauthorized activity has taken place. Any discrepancy in inventories shall be handled in accordance with the procedure.

- **Notification of managers and responders:**
  Where any incident has occurred, appropriate administrators shall be notified as soon as possible. If there is a question as to who to notify, consult with BioSafety Officer (BSO) or EHS. Responders shall be advised of the hazards of the situation by the PI (or designee) upon arrival or upon notification.

The determination of a biosecurity incident severity (in the absence of a logical and apparent conclusion) must be made by the Biosafety Officer or EHS Director, who must be notified by phone call or in person of a potential incident. In such cases, the Biosafety Officer or EHS Director, after investigation, will determine if a biosecurity incident has occurred, and if a potential threat exists to either facilities or personnel, they will notify the appropriate state, federal and local officials.

A. Reporting of Incidents, Injuries, and Breaches

Investigators must notify the Biosafety Officer or EHS Director immediately of any incidents of noncompliance, which occur during the course of Biohazards possession, use or transfer. This notification must be by telephone or personal contact. If the Biosafety Officer or EHS Director is unavailable, the EHS Asst. Director will be advised. If neither individual is available, or it is after

normal work hours, the LSU Police Department will be notified to contact the appropriate individuals at their homes. If theft or sabotage is suspected, LSU Police will be contacted directly and immediately. Emergency contact information is contained in Appendix A.

Purpose. This section sets policy for responses to specific types of incidents involving "high containment biological agents (BSL 3)" in order to protect personnel and secure pathogen holdings.

1. **Spill or Release**
   If the person involved can clean up the spill or stop the release safely, then it is appropriate to do so. If not, take the following steps:
   a) Notify supervisor and determine Severity Level:

      - Level I. Minor-control by lab, no E.H.S. or Police response
      - Level II. Moderate-lab personnel unable to control or clean-up. E.H.S. will control activities with assistance from LSU Police
      - Level III. Large- may require building evacuation
      - Level IV. Major- portion of campus affected or threatening neighbors

   b) SECURE THE AREA and evaluate situation. Ask personnel who may be exposed or carry contamination to assemble in an area safely away from the release, but selected to limit potential contamination of other personnel or areas. Call Campus Police (911) if there is a threat outside the lab and begin evacuation of the area.

   c) LSU Police shall assume security responsibility upon arrival, using technical guidance from the E.H.S. and PI(s).

   d) Notify others in vicinity to avoid exposure.

   e) Injured personnel should be decontaminated before transport. If impossible to decontaminate prior to transport, advise EMS personnel to assure isolation during transport and at the emergency medical facility.

   f) Technical information regarding the agent should be provided to medical and emergency response personnel. The PI should be contacted to assist in providing this information.

   g) Cleanup of a large disruption area, such as a lab or corridor may require contract cleanup and decontamination. E.H.S. has identified contractors suitable for this work and will coordinate this activity in conjunction with other agencies.

2. **Biocontainment security breach (Potential Theft, loss or release)**
   A biocontainment security breach may include an open doorway to a biohazard lab, an unauthorized person in the lab, an unlocked cabinet, biohazard materials left out of the containment, unauthorized use of a password, code or key, or other breach. In all cases;

   a) Notify the LSU Police and the Biosafety Officer or EHS Director immediately.

b) Stand by to assist in checking inventory, and looking for lost or misplaced materials or information.

c) Check the area to determine if there is an ongoing safety or security violation, and correct any such problems (that are safe to handle) immediately.

d) Follow the guidance of the Biosafety Officer or EHS Director and LSU Police. Provide as much information about the situation as known.

3. **Inventory violation Response Plan**

Discrepancies in inventory levels may mean loss of an agent. In the event of an inventory discrepancy, the following procedure shall be followed:

(a) Upon detection of an inventory violation which indicates the loss of an agent, follow the response plan for theft. (Biocontainment Breach)

(b) Upon detection of an inventory discrepancy where it is not clear if agents are missing:

- Notify the Biosafety Officer or EHS Director
- Lock down the laboratory, and prohibit access.
- Analyze inventory history records to determine if the mistake can be accounted for.
- If loss of agents is suspected, or if discrepancy cannot be resolved, the Biosafety Officer or EHS Director will determine the actions to be taken, including notifications as required in the rules.
- The Biosafety Officer or EHS Director (or designee) will:

    1. Ensure LSU Police are notified
    2. Ensure the CDC/NIH is notified if required
    3. Conduct an investigation and submit any necessary "*Report of Theft Loss or Release of Biohazard and Toxins*" to appropriate regulatory agencies.

(c) Upon detection of an inventory record tampering incident:

- Notify Biosafety Officer (or EHS Director) and LSU Police
- Contact Lab Supervisor and arrange an interview
- LSU Police and the Biosafety Officer or EHS Director will conduct an investigation, using techniques and technical resources necessary.
- Until the discrepancy is resolved, the area will be treated as a ******crime scene***, with access restricted and guarded.
- If theft or loss is determined, the Biosafety Officer or EHS Director will notify the appropriate agencies as required by the rules.

***Note: **Crime Scene**: once an area is determined to be a **Crime Scene**, the following actions will be taken:

- LSU Police will conduct and lead the investigation

- All material will remain in place, unless released by LSU Police. This may include equipment and Samples located within the Biocontainment area.
- The Law enforcement Investigator's Safety while in Bio- containment area will be coordinated by the P.I.'s Authorized Lab personnel.

4. **Security Incident:**

LSU Police provide Law Enforcement, Security, and response on LSU Campus. Response to intrusion detection alarms may be by protective personnel, private security firms, or local law enforcement personnel. LSU Police personnel are armed and fulfill this requirement on campus.

a) Suspicious Packages: (A package or item that enters or leaves the biohazard handling area that does not appear to be consistent with what is expected during normal daily operations (e.g., misspelled words; address to title only or incorrect title; badly taped or sealed, lopsided or uneven, rigid or bulky, oily stains, discolorations, or crystallization on the wrapper; excessive tape or string; protruding wires; housekeeping cart, tool boxes, unauthorized removal of lab equipment) **Report** a suspicious package immediately to the PI. If determined to be suspicious, the PI will immediately notify LSU Police and the Biosafety Officer or EHS Director, who will make a determination as to the proper action.

b) Violence in the workplace: Report violence to LSU Police (8-3231). In addition, secure experiments, and follow instructions provided by the Police.

c) Example of people to contact by various incident participants during a theft of agents.

PI /Laboratorian calls:

1. Supervisor
2. SVM Front Desk (if at Vet School)
3. EHS Director
4. Campus Police Central Dispatch
5. Biological Safety Officer (BSO)

Information to provide

1. Is everyone OK or require medical assistance?
2. What was taken?
3. Description of perpetrator(s)

BSO calls

1. Other PIs
2. CDC (as required)
3. LA Health Department: 800-256-2748 (7:30 to 4:30 PM; on work days: 504-219-4563
4. EOC

Campus Police calls

1. BSO (to report status Information and to advise When subjects apprehended)
2. FBI
3. State Police
4. City Hazmat
5. EMS (as necessary)

5. **Cyber security breach;** A cyber security breach may include:

- the loss or misuse of a logon ID or password,
- inappropriate use of a biohazard lab computer,
- transmission of sensitive information on unsecured routes of transmission,
- loss of media that has not been cleansed,
- virus detection in a biohazard computer,
- other breaches including missing data, corrupted files, etc.

Upon detection of a cyber security breach, the Biosafety Officer or EHS Director must be notified, will determine the severity of the incident and the appropriate response activity. The key players in making the response determination in supporting roles for the Biosafety Officer or EHS Director include the LSU IT Security Team, the PI and the LSU Police.

B. Other Types of Emergencies and Response Outlines

The primary objectives of emergency response are to reduce and eliminate harm to personnel; reduce and eliminate harm to property; and minimize business interruption. The top priority is the safety and health of individuals. If possible, always secure the biohazard agent in a safe and secure mode.

1) Injuries
   a) Determine extent, avoid further injury to victim,
   b) Provide first aid at scene, avoid contact with body fluids
   c) If more than first aid is required, call 911 for assistance, and ensure decontamination of victim
   d) Assist emergency personnel upon arrival
   e) Secure the scene for accident investigation by E.H.S. or Supervisor

2) Gas Leaks
   a) Control Ignition Sources
   b) Call LSU Police (8-3231) or Facility Services (8-3186)
   c) Turn off gas if location of valve is known and safe to do so
   d) Follow guidance of Facility Services and E.H.S.
   e) If Significant, evacuate and keep people out

3) Fires and Fire Alarm
   a) Remain Calm, DO NOT ENTER Dangerous areas
   b) Pull fire alarm and evacuate building according to building plan
   c) Call LSU Police (8-3231) provide description of emergency, where, what,
   d) DO NOT HANG UP until dispatcher has all information needed.

4) Radiation Emergency

a) Assure complete evacuation, perform headcount
b) Do not re-enter building until ALL CLEAR is given by Campus Police
c) For spills, notify LSU Police (8-3231) AND Radiation Safety (8-2747)
d) Prevent spread of contamination:
e) Contaminated personnel should remain near vicinity of lab
f) Secure the lab area

5) Bomb Threats
a) Remain Calm. Do not hang up
b) Get details: "when, where, why, what"
c) Note caller's voice style, background noises, caller ID, etc.
d) Call LSU Police (8-3231) immediately
e) Notify Supervisor and observe work areas for suspicious packages
f) Follow instructions of LSU Police

6) Chemical Spills
If the person involved can clean up the spill or stop the release safely, then it is appropriate to do so. If not, take the following steps:

a) Notify Supervisor and determine Severity Level:
i) Moderate: Lab personnel unable to control or clean-up. E.H.S. will controls activities with assistance from LSU Police
ii) Large: May require building evacuation
iii) Major: Major portion of campus affected or threatening neighbors

b) Call LSU Police (8-3231) and E.H.S. (578-5640)
c) Obtain MSDS and make available to emergency personnel
d) Protect yourself and others from exposure by closing doors
e) Control ignition sources if flammables are involved
f) Evacuate as necessary to protect personnel health and safety
g) Follow directions from E.H.S. and LSU Police

(Note: Chemical incidents which result in hospitalization, evacuation, release off site etc., may require notification to State Police. E.H.S. will normally make this notification. It must be made within one hour of occurrence.)

7) Explosion
Secure the agent or experiment in a safe mode. In the event the select agent room is physically affected, contact LSU police to provide for perimeter security, and the EHS representative to direct decontamination of the scene, or relocation of agents.

8) Power Outage
Secure experiments in Safe mode. Clean and decontaminate work surfaces, and properly remove PPE upon leaving the lab.

9) Severe weather emergencies and flooding

a) Hurricanes, tropical storms, severe thunderstorms, flooding

b) A major concern is utility failure and glass window breakage. Principal investigators should monitor severe thunderstorm watches and warnings and evaluate agent-handling procedures that may be performed during severe weather.

c) In the event LSU is to be shut down due to severe weather or flooding, the agents should be isolated and secured to prevent wind and water damage.

d) Loss of electrical power is the most likely scenario which would cause disruption to our biohazard program. During a "Hurricane Warning," the Bio Safety Officer or EHS Manager will provide instructions to the LSU Emergency Operations Center regarding notifications and actions to be taken in case of an outage. This notification will be based on the expected conditions, the status of biohazards in various locations, and other factors. Activities which can be safely shut down and secured will be secured. Animals which are in an active research (infected) may be humanely euthanized or secured at the discretion of the PI.

e) Mississippi River and local flood stages can be monitored on the Web site for the USGS at:
http://waterdata.usgs.gov/la/nwis/uv?format=gif&period=7&site_no=07374000

C. Emergency Response to Suspected Disease Outbreak

A part of any emergency response plan dealing with disease causing agents/toxins must include a response to a suspected outbreak of disease. This plan is important to not only biohazards/toxins, but also for other disease outbreaks, either naturally occurring or the result of terrorism. Outbreaks may involve humans, animals or plants.

To combat the potential spread of an outbreak, and to provide the best possible care for the infected, a Response Team of key personnel will coordinate the response. Members of this team include the following departments, acting under the general direction of the Vice Chancellors and those to whom they have delegated authority to guide the response:

- Vice Chancellors (LSU, AgCtr)
- Environmental, Health and Safety
- Risk Management
- LSU Police
- Department Head / Chair (from which the outbreak originates)
- Principal Investigator
- Building Owner / Coordinator
- Facility Services
- Director, Maintenance
- Director, Resource Services
- LSU Student Health Center
- Medical Director
- University Relations
- News Media Liaison Representative
- Intra Campus Communications
- Telecommunications
- Computing Services
- LSU Media Liaison
- Other Affected Units (To be determined at time of event)

Any occupational exposure of an employee to a biohazard or other infectious agent shall be reported to the Biosafety Officer immediately. (on-line incident reporting Form) An occupational exposure is any recognized exposure that is identified outside the normal routine in the laboratory protocol. Once this is reported, the individual is placed in a medical evaluation program to follow-up and monitor for subsequent illness.

An analysis of the potential for further transmission to other populations will be determined by the Medical Director in conjunction with the personal physician (where applicable; as noted, biohazards used at LSU would not pose such a threat), State Public Health and Agricultural authorities, and HHS/USDA. Where warranted, normal quarantine procedures will be followed for controlling any outbreak of disease. Appropriate confidentiality requirements will govern handling of medical information. If necessary to quarantine populations or areas in human, plant or animal diseases, appropriate law enforcement, public health, or agricultural officials will be involved in the decision on procedures, processes and control.

Outbreak Response and Control Procedures

1. Prevention should be the first line of defense; all appropriate safety precautions will be employed in research projects. Each laboratory, including animal holding areas, shall have a safety and security plan specifically for that lab that is consistent with university safety policies.

2. The affected individual and / or supervisor will report any occupational exposure or other incident potentially resulting in disease, to E.H.S. immediately. Both the individual and the supervisor (with knowledge) are jointly and separately responsible for assuring that the incident is reported. The institutional biological safety officer will investigate the incident and coordinate appropriate response.

3. Medical attention shall be provided at the Student Health Center. If the employee or individual wishes to use their personal physician, the person will be requested to provide complete information on the diagnosis and care recommendations to the Medical Director for the Student Health Center.

4. Follow up observation will be conducted under the supervision of the Medical Director. The Medical Director and the personal physician will jointly determine recommendations for a return to work or class.

5. Evidence of disease or serological conversion will be reported to E.H.S., as appropriate and allowed by federal law.

6. If necessary, a command post (Emergency Operations Center) consisting of members of the response team departments will be established as directed by the Emergency Management Team (See LSU Emergency Plan). E.H.S. and LSU PD will coordinate with outside agencies to administer any emergency measures necessary to comply with the security requirements of federal and state authorities.

7. Investigation of an exposure or disease incident will be performed under the direction of E.H.S., with attendance of the supervising PI, individual(s) involved, emergency response personnel (if involved) and any witnesses. The investigation will determine:

a) A complete understanding of the conditions leading up to the incident
b) Cause(s) of the incident/injury
c) An action plan for prevention of a similar or future incident, including:
   i. Needed training of individual and others
   ii. New procedures/processes required for prevention, including protective equipment
   iii. Physical plant improvements needed
   iv. Following a critique of the emergency response, a recommendation regarding any new or revised procedures for response.
   v. Follow up process to assure that conditions of the action plan are executed.

For more information on accident investigations, consult the University Safety Manual, available at http://ehs.lsu.edu

Following any significant event involving a disease outbreak or a spread into animal and plant populations, a report will be developed for the appropriate President/Chancellor.

D. Emergency Response Plan Coordination with Outside Agencies

LSU has hosted a series of orientation sessions for the Baton Rouge Fire Department and the Hazmat Response Team. The purpose of these sessions were:

- to provide information to first responders about potential biological hazards,
- appropriate actions to take in the event of emergencies in Biohazard laboratories,
- characteristics of the agents in use at LSU,
- locations of hazards on campus, and to answer any questions they may have.

These sessions also allowed responders to meet and become acquainted with principal investigators and safety staff involved in hazardous research and oversight at LSU.

E. General Emergency Response Procedures

Planning and coordination with outside parties;
LSU has notified outside response parties that access to labs containing "high containment" biohazards must have an escort for the safety of personnel. The Director, EHS and/or other authorized personnel shall be available at all times for emergency response assistance. LSU Police will control access to biohazard exclusion areas during emergency situations, until responsibility has been transferred to higher authority, such as the Biosafety officer or EHS Director. Under such circumstances, LSU Police will continue to assist in controlling the scene under the direction of the Incident Commander.

1. Personnel roles, lines of authority, training, and communication;
LSU Police are the first to respond to an emergency on campus. The LSU Police Communications Center will notify EHS, the PI and other necessary personnel on call immediately. Communications by telephone can be used to determine remotely if there

is an emergency in the area where biohazard labs are located. Where response will not affect these labs, normal access can be allowed without escort.

The PI is responsible for security, safety and emergency response coordination and providing information on safe emergency response procedures to outside agencies prior to and at the time of the emergency. Direct communication with fire and emergency medical personnel is desirable for LSU Police.

Laboratory employees should also be knowledgeable on information within the lab's emergency response plan, and such training shall be documented.

2. Emergency recognition and prevention;

Laboratory employees shall practice fire safety and make sure that all fire hazards are removed immediately. An employee spotting an emergency situation is instructed to immediately call LSU-Police at 578-3231, to report the incident. They are further instructed to pull the fire alarm and evacuate the building Chemicals in the lab require that a Chemical Hygiene Plan be adopted to assure that proper handling and protective measures are in place. For more information, see LSU's Safety Manual available at: http://ehs.lsu.edu.

3. Safe distances and places of refuge

If an evacuation is ordered, Police and other supervisory personnel will direct the evacuating people to the proper location. The primary determinant of the selection is the wind direction. If a place of refuge is needed, LSU Police will direct the evacuating personnel the shelter using upwind routes as available. LSU Police have public address speakers which can be used to direct crowds of individuals on the street.

4. Site security and control

Initially, LSU Police will control the site. Higher-level response agencies may assume control as the emergency develops. The RO will communicate with outside agencies and the LSU Police and assume Incident Commander status until relieved by higher authority. No one can enter the building until LSU Police has provided the OK.

5. Evacuation routes and procedures

Evacuation routes are posted within the buildings for evacuation assistance. These postings are included in the building inspections by safety and / or building coordinators. They shall be replaced immediately if removed or disfigured/defaced. The procedures for various types of emergency situations are located on the E.H.S. website, and are included in training for lab personnel. Included are fires and explosions, bomb threats, radiation emergencies, biological material emergencies, etc. Procedures are also included in the emergency response plan for the university campus.

6. Decontamination

Decontamination of the scene of an emergency, will be directed by the PI (Alternatively, a researcher who is familiar with the lab and the agents may provide assistance.) Decontamination will be carried out in a manner that prevents exposure to other personnel. The LSU Police will secure the area of decontamination to keep all unnecessary personnel out. In the event of extensive contamination of an area, an outside contractor may be used. Swab testing of surfaces/air may be conducted prior to re-occupying the area.

An infection isolation emergency treatment facility is located at Our Lady of the Lake Emergency Room (OLOL) (225-765-8826).

7. Emergency medical treatment and first aid:
[First Aid and other injuries will be treated on the work site, at the Student Health Center, or at a local clinic (Including After Hours Clinics), as directed.]

- If a person is down in the lab, and life is threatened, LSU Police may enter the lab to provide emergency medical assistance.

- The individual down should be decontaminated and outer protective clothing removed, and the individual moved to a non-contaminated area prior to EMS retrieving patient. No employee should enter an area where an IDLH condition exists without appropriate protective equipment. An N95 respirator may be used in lieu of a SCBA for rescue in labs where aerosol exposure risks exist. LSU Police are equipped with SCBA equipment, and are authorized to enter areas to respond to fire and other emergencies.

- EMS stated that they do not enter "Hot or Warm zones" in relation to hazmat incidents, they work closely with Baton Rouge HAZMAT who is responsible for patient decontamination. EMS stated that the patient would need to be de-contaminated prior to them providing treatment. They stated that in their procedures, when dispatched to a LAB, Baton Rouge HAZMAT is also dispatched. Baton Rouge HAZMAT will "stand down' if it is stated "No Release or Exposure" is stated by the requestor.

- EMS stated that they would accept a patient decontaminated by personnel in the area as long as the "on-scene coordinator" states "*that the patient has been decontaminated."*

- In addition, if the patient has been exposed, yet is conscious, external decontamination should still be performed, and the patient should wear a "surgical mask."(or N-95) EMS will follow standard precautions in this type of event. They also requested that information on the hazardous material be provided to them so they can take it with patient to the hospital.

8. Critique of response and follow-up

On all responses, a critique and follow-up process will be instituted. Institutions and individuals and agencies will be invited to participate. The critique will identify problems encountered as well as processes that worked well in an effort to improve overall response. This critique will be chaired by the EHS Director (or alternate). A written action plan will be developed based on the recommendations of the group conducting the critique and then shared with university administration, building coordinators, and outside agencies who participated in the response. Follow up on the action plan shall be tracked by the Biosafety Officer or other authorized person.

It is critical that all incidents be reported to EHS if a BSL 3 risk group pathogen is involved in any way. Some incidents must be reported to CDC or other federal authorities. EHS is responsible for making this notification.

Appendix A

Incident contact information

Entity Officials:

Biosafety Officer	Gregory Hayes	225-578-4658 (office) 225-767-8413 (home) 225-202-4804 (cell)
EHS Director:	Mike Durham	225-578-8507 (office) 225-303-3003 (cell) 225-761-1318 (home)
EHS Asst. Director:	Michael Hooks	225-578-8498 (office) 225-303-2711 (cell) 225-927-2431 (home)
Radiation Safety	Wei-Hsung Wang	225-578-2743 (office)
Chemical Safety Manager	Jerry Steward	225-578-4314 (office) 225-955-8272 (cell) 225-272-0072 (home)
Fire Safety Officer/Manager	Pat West	225-578-0534 (office) 225-335-2168 (cell) 225-753-4502 (home)

Building Owners/Managers:

Veterinary Science Assoc. Vice Chancellor	Philip Elzer	225-578-4763 (office) 225-673-4470 (home) 225-802-6811 (cell)
Dean, School of Vet Med.	Dr. Joel Baines	225-578-9905 (office)

Security Officials:

LSU Police Department	Dispatch	225-578-3231
LSU Police – SVM Security		225-578-9811 (front desk)

Emergency Officials:

State Police Hazmat – 225-925-6595

Fire Department Hazmat – 225-354-1421

Federal Agency officials

Homeland Security:

Phillip Constantin	(Protective Security Advisor)	504-202-1081
David P. Hunter	(Protective Security Advisor)	225-925-5436

FBI – WMD – 225-291-1055

CDC: 404-718-2019