GENERAL

Background: On December 31, 2012 the U.S. Department of Agriculture published a Final Rule in the Federal Register entitled: “Handling of Animal/ Contingency Plans.” The purpose of the Final Rule was to require all research facilities to develop contingency plans for the handling of animals in the event of an emergency or potential disaster. The Rule also requires training of all personnel charged with the care of animals housed in research facilities. To that end, the SHARRPI documents Stevens’ “Emergency Preparedness Guidelines and Plan for the Animal Facility.”

Purpose: Stevens has in place a preparedness plan in case of an emergency or a natural disaster that could impact the animal facility. This policy is meant to consider likely scenarios and define the systems in place and the actions necessary to prevent pain, distress and deaths of research animals due to loss of systems such as those that control ventilation, cooling, heating or the provision of potable water as well as unforeseen external threats such as intrusion of the Facility space.

Administration: The Office of Sponsored Programs in conjunction with the appointed Veterinarian, the Director of Environmental Health and Safety and other appropriate offices within Stevens are responsible for the review and revision to this Plan.

Background Information: To ensure the animal care program complies with all local, state and federal guidelines during natural disasters, hazards or other unplanned events that may affect the animal facility.

PROCEDURES AND SYSTEMS

The following systems are currently in place to monitor and notify the appropriate parties should there be a failure of services that will affect the animals under the purview of the institution.

1. Monitoring
   a. Stevens has in place a remote monitoring system for heating, ventilation, and cooling (HVAD). The HVAC system is monitored daily through remote software based system. Daily visual inspections of the animal facility are also performed by Stevens’ staff.

   b. When such monitoring occurs either through the remote system or through in-person inspections and indications of a problem or concern is noted, the appropriate individual identifying the problem or concern will notify the Principal Investigator and contact Physical Plant (if the Physical Plant is not already aware through the monitoring system) and have them respond to the situation. The facility manager will then notify both the veterinarian and the head of the department who will be in constant contact either on site or by phone until the services are restored. The facility manager will inform the head of the department of all service issues and steps taken to resolve the problem.
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c. The Stevens’ animal facility is accessible only by an authorized swipe card and is monitored 24/7 by a ceiling mounted, cage enclosed video camera.

2. Supplies

a. The animal facility has enough rodent equipment (caging, water bottles, bedding) and feed on hand to continue operations for a minimum of one week should there be a power failure or loss of sanitation equipment. Stevens’ animal facility personnel are considered essential personnel and arrangements are able to be made in order to ensure that they are able to communicate and travel to the facility in case of emergency situations.

3. Situations and Scenarios

a. Weather Emergencies – in the event of weather emergencies as list below, Stevens’ employees with responsibility are required to report until an evaluation of area needs are determined. The severity and type of the weather event will determine the preparation and/or response. Individuals with pre-determined or pre-set responsibilities are expected to report to work. The following are some considerations during various weather emergencies:
   - Cold Weather/Blizzard: Staffing, Electrical Services, Heating, Food Storage and Deliveries
   - Extreme Heat/Brown outs: Electrical Services, Cooling critical areas and animal holding rooms
   - Hurricanes/Tropical Storms/Severe Thunder Storms: Staffing, Electrical Services, potable water, HVAC system and physical building damage, i.e., wind/flood impact

In the event of a weather emergency, the Animal Care staff ensures that all necessary equipment is prepared ahead of time. Water bottles will be prefilled and ready in case the storm affects the area water supply. In case of possible water supply contamination sterile bottled water would be purchased and used as needed. Additional animal feed will be ordered and stored in the facility prior to the storm. Should no emergency need of the supplies occur, they will be rotated into stock in place of purchases that might normally be scheduled for regular use thereafter to avoid spoilage or waste.

b. Internal Systems Failure – Stevens has plant operations staff monitoring facilities daily. In addition, the Veterinarian is on call 24/7. They have access to the emergency contact information of all principal investigators and the Director of Environmental Health and Safety.

   1. Electrical Failure: The McLean Building has an emergency generator in the event of electrical service failure. The generator is tested monthly to ensure it will be operational should it be needed. The generator services the entire Animal Facility. The air handling system, exhaust system, water pumps, and emergency lighting are all backed up by the emergency generator to ensure the continued delivery of these critical services. Flash lights are available to the animal facility to ensure that the animals are being observed during power failures. In the event that the emergency backup fails and effort to bring systems back on line prove uncertain or difficult, the following procedures will be followed as they may apply.

   2. HVAC Failure:
      i. Rodent Ventilated Racks will be disconnect from room exhaust
ii. **High Temperature** – If the problem cannot be fixed in a timely manner:
   - Animal doors will be opened to circulate the air or portable cooling units will be procured and set up to lower ambient temperatures
   - Mice will be transferred into static micro isolator cages if available
   - Populations will be reduced if necessary and that will not destroy any irreplaceable research. Such determinations will be made in concert between the PI and Veterinarian

iii. **Cold Temperature** – if the problem cannot be fixed in a timely manner:
   - Portable heaters will be procured and set up in the rooms at a safe distance from animals
   - Extra bedding and nesting material will be added to cages
   - Populations will be reduced if necessary and will not destroy any irreplaceable research. Such determinations will be made in concert between the PI and Veterinarian

3. **Water Contamination** – Should there be a water emergency the animal facility has access to distilled water. In addition Stevens has vendors that can supply potable water if needed.
   
i. Animal care technician keeps a limited number of extra water bottles filled for the rodents available in the event of a water emergency and will inspect this availability daily and rotate this emergency stock on a monthly basis

   ii. Vendors are contacted should more potable water be needed as well as sterile disposable water bottles

4. **Physical Threat to Animals**

   This is defined as a situation where the animals would have to be moved from their holding rooms to another room or area in the building to protect them from physical harm (Flood, Fire, Room Integrity failure).

   Threats may be defined by the following classifications and subsequent scenarios:
   - **Local Threat** – defined as a threat to individual room(s) in the animal facility.
   - **Facility Threat** – defined as a threat to the Animal Facility or to multiple floors in the building or the building in its entirety.

   The safety of the personnel working within the research building or immediate areas is the initial and obvious priority. Should the Animal Care Staff be deemed to not be in immediate danger the following protocol with be implemented:
   
a. The animal facility has mobile caging and racks that allow for the safe and secure movement of research animals if needed.
   
b. Animal Care Staff, Manager or designee will contact the appropriate response team to handle the emergency
   - **Physical Plant** – Flood or Room Integrity Failure
   - **Campus Police** – Fire
   - **Campus Police and EHS** – Hazardous Spills
   
c. The appropriate response will be enacted per the Steven’s Institute Emergency Response Plan
   - **Fire** – Pull stations and fire extinguishers are available within the facility and are checked monthly.
   - **Stevens Institute Emergency Evacuation Procedures** are in place and drills are conducted regularly.
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Stevens’ Institute of Technology

Relevant Area or Committee: IACUC – Institutional Animal Care and Use Committee

- Hazardous Materials Spill – Specific response and handling is found in the SIT Chemical Hygiene Plan.
  d. Every effort will be made to move the animals in the facility to either a safe place within the building until the threat is over or to the loading dock of the research building. Once the emergency is contained and assessments to the condition to the animal facility have been assessed a plan as to the animals disposition will be made.
- Animals will be returned to their respective rooms if safe.
- Animals will be housed in other holding rooms within the animal facility that are deemed safe.
- Extreme damage to the animal facility; making it impossible to return the animals to the holding facility may require the euthanasia of the animals. Euthanasia drugs, CO2 and rodent euthanasia chamber are mobile and can be removed from the animal facility and brought to a safe area during such an emergency. This will allow the Clinical Veterinarian or designee to euthanize the animals in accordance with the most recent AVMA Guidelines on Euthanasia.

5. Other Threats

Security Threat – (Break-In/Unauthorized Entry) - The animal facility and holding rooms are locked in order to prevent entry from unauthorized personnel. Should such a break-in or unauthorized entry be found to have occurred, individuals can conduct a preliminary inspection to ascertain whether any damage or theft of property has occurred and that the animals have not been harmed, but must follow up at first available opportunity to report incident/threat to the animal facility personnel and to campus police who will respond and handle further any investigation that is needed.

Bomb Threat (Appendix 1 of Stevens Emergency Procedures) - If you observe a suspicious device, do not touch it or move it. Clear the area and call Stevens Police immediately at 201-216-5105. If you are advised of a bomb by phone, note the date, time, location of the call and ask the caller where, when, how, why the bomb was placed. Ask if the caller is a student. Note the age, gender, speech pattern, attitude, background noises, accent, etc. If you have caller ID, check to see where the call came from. If the threat was received in the mail or by email, save all accompanying material and handle the envelope as little as possible. Note the return address or email address. If a device is located, do not touch or move it and do not use a cell phone or radio within 100 feet.

Active Shooter (Appendix 1 of Stevens Emergency Procedures) - An active shooter is a person who is actively engaged in the killing or the attempted killing of people. In most cases, active shooters use firearms as their weapon of choice, while displaying no predetermined selection of their victims. Incidents involving an active shooter are fluid-like, ever-changing and place tremendous demands upon law enforcement as they deploy enforcement personnel in an effort to quell the shooter’s intentions to kill innocent individuals. It is the intention of this document to provide insight into what students, faculty and staff who find themselves involved in an active shooter scenario, may expect from responding law enforcement officials.

How you respond to an active shooter situation will be formulated upon several dynamic and personal limitations. Always keep in mind that there may be more than one shooter involved as well as multiple buildings. Although it may be difficult, always try to remain calm and project that calmness to your peers and to others with you at the time. Pay attention to any and all instructions and immediately obey all orders which you may hear from law enforcement officials. In the event that an active shooter enters your classroom or office, immediately call the Stevens Police Department at (201) 216-5105 or dial 911. If you are confronted and unable to speak, do not hang up the phone unless
ordered to do so by the shooter. If you are unable to safely escape or hide, you may be able to negotiate with the shooter. Consider the following techniques:

Remain calm, sound confident, do not raise the tone of your voice, do not respond defensively, do not touch the person, do not challenge the shooter, do not accept the weapon if offered, ask that it be laid down, do not invade their personal space (3-6 feet). Engaging in a physical confrontation is always a last resort and should only be considered after all other options have failed.

4. Training

All individuals with direct roles in the operation of the animal facility or handling of animals or those who are investigators/study personnel on either active or proposed studies will be provided a copy of this plan, once implemented and effective as of July 31, 2013. Protocols that are in an active status and which were approved prior to the effective date of the plan (July 31, 2013) must review the policy and undergo training with the IACUC no later than September 31, 2013. All individuals on protocols submitted for review/approval moving forward after the implementation date will be required to review the plan and undergo training regarding the procedures with the IACUC prior to an approval being issued.

5. References

1. 9 CFR Parts 2 and 3, “Handling of Animals; Contingency Plans.” Animal Plant and Health Inspection Service, USDA.


