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Michigan Technological University

Animal Care Facility Emergency Response and Contingency Plan

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About this Plan

This plan has been developed in coordination with the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) and the Animal Welfare Act regulations and provides instructions for the humane handling, treatment, transportation, housing, and care of animals in the event of an emergency or disaster within Michigan Technological University's (MTU) Animal Care Facility (ACF). This plan also provides information and guidance to protect individuals working in the (ACF). This plan contains registrant information, maintenance of the program, important contact information, and description and responses to situations that are most likely to trigger this plan.

1. Registrant Information

1.1. Licensee Information

Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931
USDA License Number: 34-R-0142

1.2. Institutional Official

Kathleen Halvorsen
Associate Vice President for Research Development
1400 Townsend Drive
Lakeshore Center - Room 302
906-487-3098
kehalvor@mtu.edu

2. Maintenance of Program

2.1. Annual Review

The Animal Care Facility Contingency Plan will be reviewed annual for compliance and updates by essential personnel. Any changes made to the plan must be communicated to the ACF staff within 30 days. Any follow-up training will be done annually or as needed during ACF staff meetings.

2.2. Training Program

New Employees
New employees will acknowledge they have received and reviewed the current contingency plan as a part of their new employee orientation.

Existing Employees and Researchers (anyone with access to the ACF)
Existing employees will annually acknowledge they have received and reviewed the current contingency plan.

Sufficient preparation is critical to successful mitigation of emergencies. Each Animal Care and User Program (ACUP) staff member should review and be familiar with workplace evacuation routes, emergency response procedures, equipment, and supplies before an actual emergency occurs.

A personnel training program using the Animal Care Facility's Emergency Response Plan is critical to the outcome of the specific situations. Subtle changes in routine operation may necessitate changes in the plan and require additional training of personnel.

1. Read and understand the Animal Care Facility's Contingency Plan.
2. Be familiar with the building's floor plan, evacuation routes, and designated gathering location.
3. Participate in practice scenarios – fire drills, power failure, animal escape, animal bites, chemical spill, eye splash, etc.
4. Read and familiarize yourself with the ACF emergency procedures, emergency phone numbers.
5. As part of training, ACF personnel needs to know the location of the following:
    a. Emergency information (guides, manuals, SOPs, telephone numbers)
    b. Telephones
    c. Emergency evacuation routes
    d. Fire alarm and extinguishers
    e. First aid kits
    f. Eye wash station and emergency shower

3. Important Contact Information

Note: in the event of a fire, police, or medical emergency, Dial 911

Describe the emergency to the dispatcher and give your location: Minerals and Materials Engineering Building (M&M), 3rd floor Westside Doorway Animal Care Facility. Michigan Technological University, Houghton, MI.

3.1. Primary Contacts

Contact	Contact Information
Attending Veterinarian	Dr. Chris Boehm, cahoehm@mtu.edu
USDA Inspector	Kurt Hammel, kurt.a.hammel@usda.gov
Emergency Management Agency	Houghton County Emergency Measures, Christopher Van Arsdale, 906-482-6400, oem@houghtoncounty.net

Contact	Contact Information
Animal Poison Control Center	Pet Poison Hotline 855-764-7661
Animal Evacuation Route	Evacuation routes placed at ACF exits
Fire Department	Call 911 in case of emergency
Police Department	Call 911 in case of emergency Michigan Tech Public Safety: 906-487-2216 (7-2216 on campus)
Hospital	Call 911 in case of emergency Nearest hospital and emergency department: UP Health System-Portage, 500 Campus Drive, Hancock, MI 49930
Poison Control Center	Webpoisoncontrol.org 24/7 hotline 1-800-222-1222, Call 911 for medical emergencies
Power Company, Gas Company, Water Company	Michigan Tech Facilities Emergency Line, 906-487-0001

3.2. Other Contacts

ACF Essential Personnel

Contact	Contact Information
ACF Director	Kaitlyn Studinger, 906-869-4036 (c), kmstudin@mtu.edu
Assistant Vice President of Research Integrity (AVPRI)	Brent Burns, 906-487-3674(o), 906-281-7746 (c), bburns@mtu.edu
Institutional Animal Care and Use Committee (IACUC) Chair	Jeff Lewin, 906-487-3153(o), jclewin@mtu.edu
Director, Research Support	Jari Sague, 906-487-1823, jwsague@mtu.edu
IACUC Committee Member, Director of Biological Laboratory Operations	David Dixon, 906-487-2131(o), dcdixon@mtu.edu
Environmental Health and Safety, Manager of Health and Safety	Scott Wendt, 906-487-2118, srwendt@mtu.edu

Additional Health Emergency Contacts

Contact	Contact Information
Copper Country Vet Clinic	906-482-1771
Northland Veterinary Clinic	906-482-3400

Building and Equipment Support Contacts

Contact	Contact Information
Building Mechanic	Mike Myllyoja, 906-487-2303
Michigan Tech Facilities	906-487-2303
Michigan Tech IT	906-487-1111
Anesthesia Machines	Great Lakes 45, Chuck Lesko, Sales and Service, 616-531-2656, greatlakes45@att.net
Dish Washer	Company: Innovative Laboratory Systems (mfg. by Steel Co) Sales Rep: Nick St. Martin, nick@innovlab.com, 608-215-8857 Technician Contact: 561-791-8313
Autoclave	Company: Beta Star Sales Rep: Dave Larson, 484-532-5987 Technician: tim@ss-plus.com, 262-948-9451

General Safety Contacts

Contact	Contact Information
Michigan Tech Safety Alert	ACF staff members are required to keep updated contact information with the Michigan Tech's Safety First Alert Service mtu.edu/safetyfirstalert.
All ACF Staff	All staff members may be contacted simultaneously by email by sending a message to acf-staff-l@mtu.edu.
All ACF Principal Investigators (PI) and Users	All ACF Principal Investigators, students, staff and individuals with ACF access can be reached by using the email acfaau-l@mtu.edu. An individual list of PIs using the ACF can be obtained from the ACF Director.

4. Emergency Response Situations and Response

This section describes general facility communication and policies as well as describing specific situations that would trigger a contingency plan response.

4.1. General Communication

Slack, a messaging app for business, is used as a primary means of communication with staff and during weekends, with on-call supervisors. The slack workspace is called "ACF'' and there are 2 main channels: #acf and #weekend-acf. The email list "acf-l@mtu.edu" is also used for regular communication pertinent to ACF activities so it is available in email format. This email address is typically cc'd when messages are sent to PI's, research students, the vet, and ACUP administrators, as necessary. For any urgent animal-related issues, both the ACF staff and PI's/research groups have been told to contact the ACF director and/or the "on-call supervisor" immediately. The supervisor will then contact the vet immediately after they know about the situation. In an emergency, the ACF supervisor will send an email to the "**acfaau-l@mtu.edu**" email list, which includes everyone with approved regular access to the facility.

4.2. General Information/Policy

Instruction and training for emergency response is required for all new employees within 30 days of employment. This disaster plan will be reviewed annually and updated as needed. Any changes made to the plan must be communicated to the ACF staff within 30 days. Any follow-up training will be done annually or as needed during ACF staff meetings.

NOTE: In all emergencies, human life and safety will take precedence over animal life.

4.3. Emergency Response for Campus-Based Satellite Animal Research Locations

In the event of an emergency while animals are temporarily located in a satellite research location, the following guidelines will be implemented:

4.3.1. All university or building-specific procedures will be followed to ensure safety of research personnel.

4.3.2. If the building must be evacuated (fire, flood, etc.):

a) if there is time, and it is safe for personnel to do so

i. any animal(s) present not undergoing a surgical procedure will be secured in its enclosure/cage prior to research personnel leaving the building.

ii. any animal(s) present undergoing a surgical procedure will be euthanized and the carcass will be secured in its own enclosure/cage prior to research personnel leaving the building.

b) In any event, after reaching safety, research personnel will notify the ACF Director immediately to report any animal(s) that are present in the building (living or deceased),

including Animal Identification (species, cage number, ID tags, etc), Building Name and Room Number(s), exact location in the room(s), condition and status of the animal(s) (pre-, mid-, post-procedure, euthanized, SIGNIFICANT ANIMAL, etc), and food and water levels available in the primary enclosure.

4.3.3. Any emergency response event that occurs in a satellite location where animals are present will be assessed and handled by the ACF Critical Incident Response Team (CIRT). Research personnel will monitor points of communication (email, cell phone, etc.) for important information and/or updates until the situation is resolved.

4.4. Emergency Response Situations and Response

4.4.1. General Medical Emergency

Preparedness

- It is important that you know what to do and who to contact if you or someone else is injured while working in the Animal Care Facility.
- Michigan Tech has an Emergency Medical Service (EMS) team that is able to respond to medical emergencies on campus 24 hrs/day.
- Michigan Tech Public Safety and Police Services are part of the 911 emergency response network and will dispatch EMS, Police, Fire, and Ambulance, as needed.
- The information below provides instruction for medical work-related injuries.

Response to Emergency or Urgent Medical Situations

- Call 911. Be prepared to describe your location, how many people are injured, the type of injury, if known, and other safety related issues (fire, chemical release, police required, etc.) Public Safety will automatically be notified that a 911 call was made from campus and emergency responders will be dispatched.
- Provide assistance to the injured person as you are able. Personnel certified in first aid or CPR may provide emergency care, untrained staff may provide support.
  - Personal safety is the first consideration.
  - Do not enter an unsafe situation at the risk of your own safety.
  - When assisting someone who is bleeding, wear nitrile/laboratory gloves to prevent possible exposure to bloodborne pathogens.
- If possible, arrange for someone to meet the emergency responders at the entrance of the facility to provide access and give directions.
- If the injury involves exposure to a hazardous chemical or material, the emergency responders and ER doctors must be notified and provided with a safety data sheet for the chemical. Access the safety data sheets for all chemicals used in the facility at mtu.edu/sds. If the internet is down call 1-800-255-3924 (ChemTel) to have the safety data sheet information faxed.

Response to Minor Injuries or Illness

Illness or injuries that do not require immediate medical assistance, such as minor allergic reactions, burns, cuts, sprain/strains, etc., should be given appropriate care and treatment as needed.

Recovery/Follow-up

All work-related injuries or illness (even minor injuries that do not require an emergency response) must be reported immediately to the ACF Director. After receiving a report of an injury, the ACF Director must file an Incident and Injury Report with Environmental Health and Safety (EHS) within 24 hours.

4.4.2. Utility Failure: Electrical Power, HVAC, Flood, Steam

Power Outage

Preparedness:

Flashlights and headlamps are located in each of the animal rooms and in 317. There is also a flashlight located in the storage room and in the office (323).

Response:

- Contact on-call supervisor
- If you are using one of the hoods in the facility when the power fails (cage dumping station, vertical flow workstation, biosafety cabinet or fume hood), return any animals you may be working with to their cages and close the sash to contain hazardous materials inside the hood.
- Shut off the breaker switch to the autoclave and cagewash.
- Contact the building manager or facilities for information about the cause of the failure and an estimate of when power may be restored. If estimates indicate the outage will be prolonged, the Critical Incident Response Team CIRT will meet and discuss options of sheltering-in-place or evacuation to meet the animals' basic needs.

When Stable Power is Restored:

- Check animal rooms for correct lighting, temperature and humidity.
- Reconnect the ventilated cage rack and other equipment and verify that they are operating correctly.
- Turn on the main breakers for the autoclave and cagewash and ensure that all equipment is operating correctly.
- Verify that the refrigerators and freezers are working properly.

HVAC Failure

Preparedness:

Be familiar with how to identify HVAC failures, which can result from electrical or mechanical failure and extreme weather changes. You can identify HVAC failure by:

- A noticeable loud wind noise or high-pitched squeal going through any doorway.
- Difficulty opening or closing facility doors.
- An extreme rise or fall in temperature or humidity in any area of the facility.
- An absence of the sound of the HVAC system running.

Response:

In the case of HVAC failure, several steps must be taken:

- Contact the ACF Director; keep the phone with you.

- Contact Facilities Management.
- Check the temperature and humidity in each animal room.
- If the temperature or humidity levels are too high or low, corrective measures must be taken.
    - If the HVAC problem is localized, move the animals to a temporary housing area that is not affected.
    - If the HVAC problem is facility wide, use portable air conditioners, dehumidifiers, humidifiers, heaters, and fans as needed to help regulate the environmental conditions (all equipment is located in the storage room).
    - During an HVAC failure, conditions in the ACF can be maintained in a comfortable range for at least one to two days. A decision to shelter-in-place or evacuate the facility must be made based on current weather conditions and estimates of when service is likely to be restored (see below, Critical Incident Response Team).

Humidifier Failure

- Deploy and turn on room humidifiers to animal rooms. Set humidity at 45%. Check water levels daily if units do not have a drain hose.

Flood

Preparedness:

Become familiar with flood response plan below

Response:

If flooding occurs due to piping issues or extreme weather, follow these steps:

- Contact the on-call supervisor.
- Contact the building manager/Facilities Maintenance.
- Before entering the area, make sure there are no electrical hazards. If hazards prevent you from entering, contact the building manager/facilities immediately for assistance.
- If there are no hazards that prevent you from entering the area:
    - Determine if any animals are at risk and move them to a refuge area. This can include another location in the same room, a different room in the ACF not affected by flooding, or an area outside the ACF if necessary.
    - If possible, move any equipment that may be damaged by water.
    - Try to isolate/control the flooding using buckets, towels or spill kits.
    - If possible, identify the source of the flooding.

Unexpected Steam Shutdown

Preparedness:

In the event of an unexpected loss of steam to the facility certain equipment will not be operational including the autoclave, dishwasher, and building heat. Become familiar with procedures for specific equipment listed below.

Response:

Autoclave non-operational:

- All cages must be rinsed with 180 degree water.

- Bedding can be autoclaved at the DOW building in autoclave bags.
- Water can be given straight out of the tap.
- Irradiated food and bedding does not need to be autoclaved.
- All waste processing activities will halt while the autoclave is shutdown.
- Lab coats do not need to be autoclaved during this time period.

Dishwasher Process

No direct line hot water during steam outage however the hot water booster can get the water to the necessary temperatures to use the dishwasher. If the dishwasher is non-operational then cages can be washed by hand in the grooming sink. Hot water should be used and all debris should be scrubbed off using detergent. Cages MUST be autoclaved if they are washed this way. Contact the ACF Director who will work with the Dishwasher customer service.

Building Heat non-operational:

Space heaters should be set up with their thermostats set to room temperature. Verify with the building mechanic and/or the Central Heating Plant that air handlers will run as normal. AHU-4 and AHU-7 are the air handlers that feed the ACF.

4.4.3. Fire Emergency

Preparedness

- Be aware that smoke, heat and toxic gasses from a fire rise toward the ceiling and are the most common cause of fire related injury and death. Avoid these by staying low during a fire evacuation.
- Maps of the animal care facility showing evacuation routes and locations of exits, and fire alarm systems are posted in the facility.
- Keep all egress routes and evacuation corridors within the ACF clear. Do not store equipment, or supplies in these areas.
- Keep flammable liquids in approved storage cabinets.

Response

Note: Animals and Fire

- Human life takes precedence over the life of an animal. The first priority in a fire is getting people to safety.
- If the animals in the facility are in danger, notify Public Safety and Police Services and the fire department.
- If fire department personnel deem it safe to evacuate the animals, they will authorize an evacuation. Evacuation location will be determined by availability, accessibility, and route access.
- ACF staff and other non-emergency personnel shall not re-enter the building to evacuate animals without permission from either the fire department OR Michigan Tech Public Safety and Police Services.

If you discover a fire

- Activate the nearest fire alarm pull station
- Alert people in the immediate area of the danger. Tell them they need to evacuate.
- Close the valves on any oxygen tanks that are in use, if it is safe to do so.
- Exit the building, checking doors for heat before carefully opening and closing doors between you and the fire as you leave. Open doors can allow smoke and fire to enter stairwells and exit hallways, severely jeopardizing safe evacuation and hampering efforts of fire department personnel.
- When you are safe, dial 911 from an on-campus phone or from a cell phone and provide details of the location and nature of the fire.

If the fire alarm sounds

- Close the valves on any oxygen tanks that are in use if it is safe to do so.
- Secure any loose animals if it is safe to do so.
- Walk to the nearest exit; check doors for heat before carefully opening; close doors between you and the fire as you leave; proceed to the designated gathering place located on the lakeshore side of the DOW building near the building entrance doors.
- Provide assistance to individuals that require help evacuating the building. If they are unable to exit the building, escort them to the closest safe refuge area and wait for rescue assistance. See evacuation map for locations of safe refuge areas. If the primary route is blocked, move to the alternate safe refuge area near the stairwell in the North-West corner of the building.
- Do not use the elevators.
- Remain outside until notified by the fire department that it is safe to go back in.

If trapped in a room

- If possible, use a phone to call 911 to notify them of your position.
- Close as many doors as possible between you and the fire.
- Place cloth material (wet if possible) around or under the door to prevent smoke from entering the room.
- Signal to someone outside or in the hallway by shouting at regular intervals.

If trapped in smoke

- Drop and crawl toward an exit.
- Hold your breath as much as you can.
- Breathe slowly through your nose, using a towel or shirt as a filter.

If forced to advance through flames

- Hold your breath.
- Move quickly.
- Cover your head and hair.
- Keep your head down and your eyes closed as much as possible.

Recovery

- Do not re-enter the building until given authorization by the fire department or Public Safety.
- Assess the condition of the facility and perform triage of the animals and determine the most appropriate course of action: resume normal operation, relocation within the facility, evacuation to an alternate site, euthanasia.
- Re-establish all procedures necessary for care of the animals.

4.4.4. Weather Emergency

Preparedness

A weather emergency is an event that compels the University to close or issue a "seek-shelter" notice to ensure the safety of students, faculty, and staff. Weather forecasts and advisories are generally broadcast in advance of severe weather.

- Listen to the radio or other broadcasts or check the internet for weather information.
- The University's website, Safety First Alert system and local radio stations will provide notification if the campus is closing.
- Ensure that adequate food and water are available to support the animal colony during weather related emergencies.
- Also consider food, water and supplies for staff members if they must shelter in the facility and care for animals during the storm.

Response

Tornado Warning:

A tornado warning is issued when a tornado has actually been sighted in the surrounding area. If a tornado warning has been issued:

- Stay inside.
- Stay away from outside walls, mirrors, glass, overhead fixtures, and unsecured objects such as filing cabinets or bookcases.
- Stay in the facility. Stay away from windows in other parts of the building.
- Assist individuals that may need additional help.
- In potentially exposed areas, crouch low with your hands covering the back of your head and neck.
- Do not leave the shelter area until after the storm is over.
- Continue to monitor the weather via radio, television, or internet, until the tornado warning/watch has been lifted.

Summer Storms

A severe thunderstorm warning means that severe thunderstorms are in the area. These storms are possibly accompanied by cloud to ground lightning, high winds, and hail. If you can hear thunder, you are within striking distance of lightning.

- Stay in the facility, and stay away from windows in other parts of the building.
- Do not touch items that conduct electricity such as computers, light switches, and electrical outlets.
- Listen to the radio or other broadcasts or check the internet for weather information.

Winter Storms

Winter storms may limit access to the University and the Animal Care Facility. Winter storms are frequent in the area and the university, city, and county are well equipped for managing heavy snow falls. Historically, the campus is closed for less than a 24-hour period.

- When a major storm is forecast, animal food, water and bedding must be checked and replenished prior to the arrival of the storm to ensure that the animals' needs are met for the next 48 hours.
- Employees who are scheduled for work but cannot get to the facility because of weather must try and find a coworker that is able to fill the shift (phone call or Slack #acf).
- In severe weather situations the ACF Director may need to make a decision about closing the facility and allowing the animals to shelter in place.

4.4.5. Animal Escape

Immediately following an animal escape, the ACF Director will assess the situation and determine the appropriate course of action for animal and human safety.

4.4.6. Feed and Water Supply Disruptions

In the event of regular food and water supply disruptions, the ACF Director will work with alternative vendors to meet the needs of the facility.

4.4.7. Hazardous Spill

Preparedness:

The ACF has various items that are considered hazardous materials. The Safety Data Sheets for all chemicals used in the facility are available at www.mtu.edu/sds. You should be familiar with these materials and understand how to work with them safely. If you are unsure about how to use or handle these materials contact the ACF Director for additional information and training.

Response to Small Spills:

If a small spill of any of these materials occurs, do the following:

Fluorescent light bulbs: Fluorescent light bulbs contain mercury vapor which can be toxic. If a fluorescent bulb breaks, leave the room immediately. Notify the ACF Director and do not allow others to enter the room. Allow the room air to exchange for 30 minutes. ACF staff will then clean up the debris and put them into a sealed box marked appropriately.

Broken glass: If you break a glass container, clean it up with a broom and dustpan. Do not pick up broken glass with your hands. Place the broken glass into the broken glass container found in 315 or 317.

Ethanol 70% and 95%: For large spills, use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Contain spill with absorbent material. Place absorbent in a sealed container for disposal. Clean small spills with absorbent material and allow it to evaporate in a well-ventilated area.

Isoflurane: Small volumes of liquid anesthetic agents may evaporate readily at normal room temperatures and may dissipate before any clean up attempts are initiated. For large spills, such as the breakage of one or more bottles, ensure adequate ventilation or evacuate the area. Large volumes of anesthetic agents may cause sedative effects. If necessary, large spills should be absorbed using a sorbent that is designed for clean-up of organic chemicals. Keep in suitable, closed containers for disposal.

Pre-empt Cleaner: Small volumes of Pre-empt cleaner - up to one spray bottle of Ready to Use (RTU) OR <500ml of concentrate. Put on appropriate PPE (eye protection, nitrile gloves, lab coat) and use paper towels or other absorbent materials to soak up the spill. Place towels or absorbent in a sealed container and check with ACF director on appropriate disposal. For large spills - more than one spray bottle of RTU OR >500ml of concentrate, consult with ACF director prior to clean-up. Large spills should be absorbed using universal absorbent pads or loose universal absorbent. Place absorbent in a sealed container and check with the ACF director for disposal.

Response to Large Spills:

You should take the following steps if there is a large spill or release of a hazardous material that is beyond your ability to clean up safely:

- Call 911
- Notify others working in the area of the spill. Leave the area; close the door and post a warning sign to limit access.
- Evacuate the area immediately if you or others are experiencing any signs or symptoms of chemical exposure such as irritated skin, or eyes, coughing, difficulty breathing, dizziness, or headache.
- If the entire building is affected, pull the fire alarm.
- Request assistance from the EHS at 906-487-2118 (7-2118 if on campus).

Do the following ONLY if you can do so without endangering yourself:

- Move animals to a safe location, if the spill occurs in a room where animals are housed.
- Identify the spilled material (container labels, shipping papers, SDS).
- Extinguish sources of ignition (unplug electrical devices).
- Isolate the vapors (close the area off from the rest of the building). If possible, ventilate the spill area to the outside of the building.

Disposal of Spilled Materials and Incident Reporting

For assistance with clean up and disposal of spilled materials, contact Research Integrity (researchintegrity@mtu.edu). Additionally, the incident must be reported via the Incident and Injury Report Form.

4.4.8. Campus Closure

Michigan Tech may close the campus during winter storms or other adverse events. Notification of a campus closure is communicated through the university's Safety First Alert Service and is also broadcast on local radio stations. Historically these closures are short-less than 24 hours. Animals should be able to shelter in place for up to 48 hours if they are provided with sufficient food and water.

- Anyone working in the facility when a closure is announced, will do the following before leaving:
  - Perform an animal check and ensure that all food and water containers are full.
  - Send a slack message to #acf informing the ACF Director and other ACF staff members that the animals have been checked and are secure.
  - On-call supervisor will send an e-mail to acfaau-l@mtu.edu informing all users and staff that the animals have been checked and are secure.
- If anyone is on campus when a closure is announced and is scheduled to work in the facility later that day:
  - Contact the on-call supervisor for further instructions; they will verify the need to check the animals before leaving campus.
- If an ACF staff member is off campus and cannot make their shift due to the closure:
  - They will send a slack message to notify the ACF Director and other ACF staff that they are unable to work the shift. They may be asked to come to campus to check the animals.
  - The ACF Director may request information about animal health and food and water levels at the last check to determine if the animals need attention during the closure.
  - If it is determined the animals will need care during the closure, ACF staff members are expected to respond if they can make it safely to the facility.

4.4.9. Public Health Emergency

Preparedness

A health emergency is an event that compels the University to reduce personnel on campus, close campus completely, or close the University entirely to ensure the safety of students, faculty, and staff.

- Information related to public health emergencies is available at https://www.mtu.edu/flex/
- The University's website, Safety First Alert system and local radio stations will provide notification if the campus is closing.
- Ensure that adequate food and water are available to support the animal colony during emergencies. Also consider food, water and supplies for staff members if they must shelter in the facility and care for animals.

4.4.10. Suspicious Person/Criminal Activity

Everyone is asked to assist in making the ACF a safe place by being alert to suspicious situations and promptly reporting them. ACF staff can help reduce the potential for threats to the facility through general awareness and observation of ACF policies. For example, verify that all controlled access doors close and lock. Do not let anyone into a locked or card-accessed area. Be aware of someone attempting to follow you into the ACF before the door closes. Take time to become familiar with researchers working in the facility and verify that new or unfamiliar persons are wearing correct

identification. ACF policy requires that ID cards are worn at all times in the facility. As an employee of the ACF, you have the right to stop anyone in the facility and ask them what they are doing. If you do not feel comfortable doing this, alert the ACF Director or Public Safety, or call 911.

If you witness criminal or suspicious behavior

- Do not confront a suspicious person.
- If a threat is imminent, vacate the area and notify others working in the facility.
- If you believe that you or others in the facility are in danger or if you have immediate concerns about the welfare of the animals call 911 and request assistance from Public Safety and Police Services.
- 911 dispatchers are trained to ask questions about the incident. Do your best to provide the following information:
  - What's happening?
  - Where are you?
  - Give detailed descriptions of the people.
  - Provide license numbers and vehicle descriptions.
  - Are there any weapons involved? If yes, what type?
- If your safety is not in jeopardy, stay on the line with the dispatcher until officers arrive to provide additional information.
- Assist the officers when they arrive by supplying them with all additional information, and ask others to cooperate.
- Do not put yourself at risk in any observed incident.
- Report the incident to the ACF Director.

If you discover evidence of unauthorized or forced entry;

- Call 911 and report your concerns to Public Safety
- **Do Not Touch** any item left behind or anything suspicious.
- **Do Not Enter** the facility until it has been cleared by a public safety officer.
- Upon re-entering the facility:
  - Perform an animal health check.
  - Carefully examine the entire work area for damage.
  - Check for missing items and equipment.
  - Watch for items that may have been left behind by the intruder such as packages, boxes, backpacks or other containers that could contain dangerous materials.
  - Report your observations to the public safety officer.
- Report the incident to the ACF Director. They can notify animal researchers, the IACUC and regulatory agencies as necessary.

Picketers/Animal Activists:

If you observe someone picketing Michigan Tech or the ACF:

- Leave the area and notify Public Safety.
- Do not make contact with the picketers.

- Do not identify yourself as an ACF employee.
- Report the incident to the ACF Director.

In non-emergency situations:

- Report your concerns or suspicions to the ACF Director.
- The ACF Director will relay this information to the AVPRI and Institutional Official.

4.4.11. Hostage Situation

If you are in a hostage situation:

- Be patient and calm. Time is on your side.
- Follow instructions from your captor, and be alert. The captor may be emotionally unbalanced.
- Don't make mistakes that could jeopardize your wellbeing.
  - Do not speak unless spoken to, and only do so when necessary.
  - If you do speak, try to use your first name. This may humanize you to the captor.
  - Do not confront, agitate or talk down to a captor.
  - Maintain eye contact as much as possible, but do not stare.
  - Treat the captor in as friendly a manner as possible.
  - Avoid speculating.
  - Comply with instructions as best as you can.
  - Avoid arguments.
  - Expect the unexpected.
- Be observant. Try to remember all distinguishing characteristics of your captor (tattoos, scars, etc.). The personal safety of others may depend on your memory.
- Be prepared to speak with the police on the phone should a line be patched through to your location. Let the police know if medications, first aid, or the like are needed by anyone. The captors in all probability do not want to harm persons held by them.

4.4.12. Suspicious Packages

Some typical characteristics, which in combination may trigger suspicion, are:

- If the package has restricted marking such as "Personal" or "Special Delivery."
- No return address or one that cannot be verified as legitimate.
- The city or state in the postmark does not match the return address.
- The package has an unusual weight based on size.
- The package is lopsided or has an odd shape, strange odors, oily stains, crystallization, protruding wires, rigid or bulky shape, excessive tape or string.

If you receive a suspicious letter or package:

- Do not try to open it.
- Isolate it.
- Call 911.

If you open a parcel containing suspicious material or alleged to contain suspicious material:

- Set it down where you are. Do not move the contaminated material. If any material spills out of the letter or package, do not try to clean it up and do not brush off your clothes as this could disperse material into the air.
- If the material is corrosive or presents an immediate danger, wash or rinse your hands.
- Close the door to the area where the suspicious parcel was opened and do not allow others to enter the area.
- Call 911.
- Stay at the scene to answer questions from Public Safety. If anyone enters the closed area in which the suspicious letter or package is located that person should also stay at the scene.

4.4.13. Bomb Threat

If you receive a bomb threat:

- Do not hang up. Remain calm. Assume the threat is real. Take the caller seriously.
- Engage the caller in conversation; ask the caller's name; note the caller's speech patterns and emotional state; try to determine the caller's age and gender.
- Listen for background noises or sounds such as music, children, heavy traffic, etc.
- Gather as much information as possible by asking questions such as:
  - When will the bomb explode?
  - What kind of bomb is it? What does it look like? Where did you place it?
  - Why did you plant the bomb? Who/what is the target?
  - Are you working with others or are you alone?
- Record the date and exact time of the call.
- Record where the call originated from as displayed on the caller ID of the phone.
- Try to remember exactly what was said. Write it down.
- Call 911 immediately, and provide them with the information.

If a bomb threat occurs in the ACF:

- If you are in the facility and have received a bomb threat, Call 911 immediately using a land line. **DO NOT** use your cell phone. Turn off all 2-way radios, cell phones, pagers, or anything else that can transmit a wireless signal. The signal that is transmitted when you use one of these electronic devices could set off the bomb.
- Do not operate any fire alarms, light switches, or power switches.
- Do not light matches or any other type of flame.
- The decision to evacuate a building will be the responsibility of Public Safety. Every effort will be made to advise people in the building of the threat.
- Public Safety personnel will normally conduct a search with someone who is familiar with the areas of the building that are subject to the bomb threat. Personnel working in the building or offices may be asked to check their work area for anything that appears suspicious. If a suspicious item is found, it should not be moved, touched, or opened, and Public Safety should be notified immediately.

4.4.14. Active Shooter

An active shooter is a person who is using a firearm or other weapon with the intent to injure or kill others. Law enforcement personnel will deploy to the location of the active shooter with the primary goal of stopping the shooter.

An active shooter incident can occur under a variety of circumstances, so no one set of guidelines is able to cover specific actions to take in every situation. Even so, familiarity with the following information can help with planning your own survival strategy in a variety of incidents.

- Protect yourself first. Then get help; call 911.
- Get away as fast as you can. If the intruder is armed and you are in the line of fire, do not run in a straight line. Try to keep objects, such as trees, bushes, and vehicles, between you and the intruder.
- If you cannot get away, hide in a place that you think the intruder will not notice.
- If you cannot get away or hide and others have been shot, you may save yourself by playing dead.
- If you are caught, you may choose to submit or fight back. If you submit, avert your eyes and obey all commands. Fighting back is very dangerous, but it could be your last option.

Special Conditions—Active Shooter(s) in the ACF (or near)

- If you cannot escape safely through an exit, lock yourself and other endangered persons inside a room. Cover any windows or openings with a line of sight into the hallway. If there is a threat from outside, close, latch, and cover the windows with curtains or shades. Block the door with furniture.
- Do not sound the fire alarm. The alarm could draw people into the open, where they could be injured.
- Turn off lights and multimedia equipment and remain silent.

5. Critical Incident Response Team (CIRT)

The CIRT has been established by the ACF to respond to disasters and emergencies that occur within the ACF and ensure that proper animal care is maintained. Every emergency situation is unique. It is the goal of CIRT to be prepared for all foreseeable emergency situations and have an action plan to implement in these situations.

CIRT consists of the following members when available: AVPRI, ACF Director, ACF veterinarian, IACUC Chair, ACF Student Coordinator; additional members may include IACUC members, Research Integrity Staff, ACF staff, and researchers as needed. The AVPRI will be the CIRT coordinator; if unavailable the ACF director, Veterinarian or IACUC chair will act as the CIRT coordinator until the AVPRI is available.

The CIRT director will act as the facility Incident Commander but will defer to University Public Safety and Police Services or local Fire Department, when present. As Incident Commander, the CIRT director will assign additional responsibilities to the CIRT team members as required (scaled based on the

severity of the emergency). Responsibilities include (multiple responsibilities may be assigned to one person):

- Safety Officer - responsible for overseeing personnel safety
- Public Information Officer - responsible for communicating with the administration, researchers, and if necessary, University Marketing and Communications
- Planning Chief - responsible for developing plan of action
- Operations Chief - responsible for putting plan of action into operation
- Logistics Chief - responsible for procuring needed supplies and equipment; responsible for arranging logistics of animals being moved out of the facility
- Financial Chief - responsible for authorizing purchases and tracking expenditures

When an emergency or disaster occurs in the ACF, the following actions should be taken:

- Contact appropriate emergency services - i.e. 911, Facilities Emergency Line, other emergency services as needed.
- Contact the Director of the Animal Care Facility; if unavailable contact the Director of the Animal Research Protection Program

Once emergency contacts have been made, the following Emergency Action Plan will be followed:

- Establish the CIRT Coordinator the CIRT coordinator, at their discretion, may assemble an initial team of key personnel (assistant(s), Safety Officer, etc.)
- The CIRT coordinator or designated Safety Officer will consult with Public Safety and local emergency personnel to determine if the ACF is safe to enter.
- Once it is established the ACF is safe to enter, the CIRT Coordinator or their designee will assess the facility and the animals.
- The CIRT Coordinator will use the initial observations, to determine if further action is needed.
- If further actions are necessary, the coordinator will contact additional CIRT members, as required (see membership and responsibilities sections above).
- Team members will gather at the ACF to determine what further actions are necessary.

Team members must assess:

- Is there a remaining imminent danger to the animals in one or more rooms in the ACF? (fire, structural, flooding, etc.) If so:
    - Does the ACF provide adequate shelter for the animals?
    - Do animals need to be evacuated to other rooms or from the ACF?
- If their area is safe, do any of the following building issues need to be addressed:
    - Is there power and lighting in the facility?
    - Is the HVAC system functional and sufficient?
    - Are there any flooding issues?
    - Any structural damage?
    - Any other hazards?
- Once the physical environment has been evaluated do any are the following husbandry activities affected:
    - Is there sufficient water?

-Is the existing water infrastructure in working order?
-Is there sufficient back up water?

- Is there sufficient food?
  -Has any of the food been contaminated?
  -Are there sufficient specialty diets available?
- Are the cage cleaning systems functional?

After assessing the above questions, team members should decide what actions are needed to give the animals the best care possible.

Actions:

- If it is determined that all the animals' needs are being met, the animals can stay in the facility and operations can resume as normal.
- If there is a temporary problem, the animals can be either "sheltered in place," or moved/evacuated to an alternate location.
- If it is decided that the animals need further monitoring, a CIRT member will be designated to stay in the facility.

5.1. Shelter in Place

- Maintain a minimum of 1 week's supply food and water for the animals.
- Order as needed alternate sources for food (example local suppliers: Tractor Supply, Erickson's) and water (out of tap or commercially bottled) if steam/autoclave will be down for more than one week.
- Consider if it is necessary to consolidate into fewer or different rooms; whenever possible mice and rats should be in different rooms; if it is necessary to place them in the same room separate by physical distance and husbandry management (cage changing) as much as possible.
- Identify alternate sources of power if needed. Coordinate with Facilities Management to access power from other sources: extension cords to other locations in the building, adjacent buildings or set up portable generators.
- If necessary consider temporary or portable ventilation , heating, cooling and lighting options (coordinate this with Facilities Management).
- Establish a work schedule during the emergency based on availability of workers.

5.2. Evacuation of Animals

If it is determined that the animals need to leave the facility:

- The CIRT will notify
  - The ACF Director.
  - The facility veterinarian, Chris Boehm, DVM.
  - The IACUC chair
  - Investigators that have animals currently housed in the facility.
  - USDA and OLAW.

- CIRT will triage animal populations. Preservation of critical or irreplaceable animals plans will be determined and managed by CIRT. Irreplaceable animals and animals involved in critical research activities will be given priority for relocation and feature a YELLOW cage card.
- The CIRT will identify the best location for evacuation based on availability, accessibility, and route access. Long term alternative animal locations will be determined as needed.
- Contact Husky Motors (906-487-2700) to provide a cargo van.
- Pack adequate food.
- Load animals into transport vehicles.
- Transport animals.
- Establish security and a work schedule during the emergency based on availability of workers.

5.3. Animal Room Temperature and Humidity

- ACF staff is responsible for monitoring and reporting any abnormal temperature and humidity levels in the animal rooms.
- Acceptable humidity levels range from 30 to 70%.
- If temperatures (^{o}F) are outside the warning range, auxiliary heating or cooling should be provided as needed in the animal rooms.
- If temperatures cannot be held within the critical response range, consider relocating or evacuating the animals to another location.

Temperature (°F)

	Set point	Warning Range	Critical Response Range
Mice	72°	<65° or >80 °	<63° or >82 °
Rats	72°	<63° or >80 °	<62° or >82 °
Rabbits	65°	<60° or >73 °	<58° or >75 °

- In addition to monitoring for temperature and humidity, animal rooms should be checked for adequate ventilation and air exchange.

5.4. Calculating Minimum Water Requirements

Water requirements for animals in the facility can be estimated by multiplying the number of animals in the facility by the average daily water consumption for an adult animal of that species.

Mice	6.7 ml per adult (225 ml/kg)
Rats	45 ml per adult (80 – 110 ml/kg)
Rabbits	400 ml per adult (100 ml/kg)

5.5. Individually Ventilated Cage (IVC) Systems

The most commonly occurring emergency problem is loss of power and the most common solution is to provide an emergency generator. If the animals must be moved the rack could be temporarily moved to an isolated part of a building where power could be supplied or if necessary the rack could be moved from the building. Consider identifying alternative ventilation if power does not return within 72 hours. As long as the ventilation system is working the cages can last up to 2 weeks without changing in an emergency situation.

IVCs are used to house rats and mice that require more stringent isolation than can be provided with conventional cage systems. If cage changing becomes necessary after relocation, the CIRT will need to determine what precautions must be taken to protect both animals and workers. For example, cage changing for animals being treated with hazardous materials such as chemotherapeutic should be done in a biosafety cabinet or a chemical fume hood; cage changing for Immunosuppressed animals must be done in a biosafety cabinet

5.6. Euthanization

During a planned evacuation animal populations will be triaged. Animals that will not be relocated will be humanely euthanized with CO2 using a displacement of 20% of the chamber volume per minute as described in and according to the AVMA guidelines for euthanasia. Mass euthanasia will be avoided if possible. However, the AVMA guidelines concede that this may be necessary in response to emergencies. If it is deemed necessary, mass euthanasia will be consistent with AVMA Guidelines for

the Euthanasia of Animals. Euthanization will be performed by trained ACF personnel, researchers, or a veterinarian.

If human evacuation is required for any emergency and an animal is in the middle of a surgical or invasive procedure under anesthesia (or other duress) and cannot safely and quickly be returned to a proper cage, the animal should be euthanized.

5.7. Priorities for Action in an Emergency

In an emergency situation the first concern is the safety of Personnel. Priorities for evacuation and care of animals during an emergency are based on the animal species; protecting unique/valuable animal breeding stocks (identified by YELLOW cage card); preserving research study integrity; animal ages; etc. Researchers will be asked to identify animals for priority evacuation and the CIRT team will assess the plan. To guide individuals responding to the emergency, a unique identifier will be tied to priority cages and will also be placed at the entrance to rooms housing animals that are designated for priority evacuation and care. On an ongoing basis, the ACF Director will work with researchers to identify priority animals for evacuation.

6. Facility Security

The ACF has multiple security features to ensure only authorized personnel are allowed to enter.

Animal Care Facility Access and Policies

- All individuals working in the facility must complete appropriate training for handling animals and agree to follow ACF procedures and policies.
- All individuals entering the facility must wear an ACF ID card at all times.
- Visitors may enter the facility with prior approval by the ACF Director. Visitors must be accompanied at all times by an approved researcher or member of the ACF staff. Note that visitors may only act as observers; they may not participate in surgeries, animal husbandry or other activities unless listed on an approved IACUC protocol.
- Cameras are not allowed in the facility except for documentation of scientific research. This includes cell phones and other devices capable of recording an image.

Security Cameras

- The ACF has security cameras located at the entrance to both hallways.
- They can be reviewed by Public Safety.
- If you have a confrontation in the facility with an unauthorized person , try to position yourself in the viewing area of one of these cameras. This will help Public Safety.

Swipe entrances

- Both hallway doors provide swipe card access to the animal care facility. Access is granted by the ACF Director and is limited to researchers with active protocols, ACF staff members, select building maintenance personnel, and select staff.
- Never give your swipe card to someone else.

- Do not let any unauthorized person follow you into a secure area.
- A report of all card swipes is kept for review.
- Immediately notify the ACF Director if you lose your Michigan Tech ID. Swipe access to the facility can be temporarily deactivated as a security measure.

Door locks

- All entrances to the ACF must be locked at all times.
- Entrances can be accessed by either swipe card or a key.
- All doors must remain closed at all times. NEVER prop open doors that require swipe access or a key to enter.

Phones

Telephone located in the facility.

- 323- On a desk in the ACF office.

7. Animal Program After-Action Report

The After-Action Report should be generated after any extensive emergency or disaster. The report should fully describe the incident, immediate effects, methods used to resolve the situation and how the problem may be averted in the future. Details of the reports will be shared as needed.

<u>Include the following in the report:</u>

1. A description of the incident including
    a. Date
    b. Time
    c. Location
    d. Personnel affected
    e. Animals/species involved
    f. Damages to the facility
    g. Equipment affected
2. Did the incident compromise the health, safety, or welfare of any animals or personnel?
    a. Was an Incident or Injury Report filed for the incident? If there were any injuries to personnel was a report filed for each injured individual?
3. Were any animals relocated or evacuated?
4. Was the incident reported to the IACUC and other appropriate organizations?
5. Describe how operations were restored.
6. Describe the loss of any space for housing animals and how it will be replaced.
7. Describe any loss of equipment and how it will be replaced.
8. Describe how the incident impacted the research of individual PIs and the University as a whole.
    a. Was there permanent loss of data?
    b. Will experiments need to be repeated?
    c. Was there loss of founder animals with/without offspring or loss of strains that must be imported or re-established?

    d. If animal health status was compromised, will these animals be replaced or restocked?
9. Estimate the cost to the facility
    a. Personnel
    b. Animals
    c. Facility
    d. Equipment
10. Was there any forewarning or sign of the impending emergency?
    a. Were these reported or discussed by the facility management?
    b. Was any action taken prior to the incident?
11. Are there other additional preparations for this type of emergency that could have prevented or decreased damage to the facility and or the disruption of normal operations?
12. Was the Emergency Response Plan consulted during the crisis to resolve issues associated with the emergency?
13. Was the personnel evacuation plan needed during this emergency, was it followed and did it work appropriately?
14. What other preparations would be useful to ensure the health and safety of personnel and animals if a similar event occurred in the future?