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CHM Alliance Pty Ltd Animal Ethics Committee Policy for Emergency Procedures	

Introduction

Animal research sites may be affected by different types which can cause similar functional disturbances that necessitate a planned and coordinated emergency response. Such events can have direct and indirect effects on animal welfare:

1. Direct: Events causing death or injury of animals have obvious and serious animal welfare consequences.
2. Indirect: Loss of accumulated specimens or data may result in work having to be repeated and more animals used in order to replace the lost material.

Consequently, to protect the welfare of animals used at research sites, there is fundamental need to plan adequately for such emergencies.

Emergencies that may be encountered include: fire, flood, power failure, contaminated feed or water, disease or injury, escapes, gas leaks, inclement weather, damage from wind, lightning and storm, road accidents, water failure and security threats.

The relevance of various types of threat and the circumstances where emergencies may arise will depend on the type of animals, the nature of the research location and the type of research being conducted.

These emergency events are in addition to animal emergencies that occur as part of the research such as surgical emergencies or injuries sustained during catching.

The *Australian code for the care and use of animals for scientific purposes, 8th Edition 2013* states that research institutions must ensure that the AEC approves guidelines for animal care and use within the institution and that these are implemented, including those which ensure that emergencies, such as fire, power failure and biosecurity issues are detected promptly and dealt with effectively.

Policy

Each establishment that holds animals should have an emergency plan that lists the types of emergencies and the procedures for dealing with each emergency.

The emergency plan should be publicised within each research site and readily available to relevant personnel.

Procedures for dealing with emergencies should identify such things as:

- after hours contact details (for example researchers, on duty veterinarian, AEC Chairperson, building maintenance, authorities for fire, water and gas leaks)
- means of detecting and dealing with power failures and breakdown in equipment such ventilation, filtration or watering systems (including the provision of temporary services until the breakdown is rectified)
- evacuation procedures and emergency accommodation for animals
- security of data, records and samples

Preparation of a Plan

As part of each project proposal an Emergency Plan must be submitted that is specific to the Project site/s.

- **Fires** – Consider the likely effect of a bushfire or structural fire affecting the building housing the animals and/or nearby structures.

- **Floods** – For susceptible sites, consider the effect of generalised flooding affecting the whole of the site or areas with buildings housing animals. For any site, consider which animal housing areas could be involved in (and the likely effects of) localised flooding from sources such as heavy rain entering storm damaged roofs, water accumulating due to blocked drains or downpipes and accidental escape of water from leaking storage tanks, burst supply pipes or defective fire sprinklers.
- **Power failure** – May be due to fire, flood, storm or other damage to local infrastructure or main supply trunks remote from your site. Consider the effects of a prolonged power outage on air-conditioning, ventilation, water reticulation, filtration and waste disposal systems. Can essential services to the animal rooms be maintained? What are the specific problems and solutions if a failure is limited to particular rooms in a single building or if it is more generalised, affecting a group of buildings or the entire site?
- **Hazardous spills or leaks** – Consider what other events such as gas leaks; chemical, radioactive or biological spills may pose a risk to animals either directly by exposure to the hazardous materials or indirectly, by preventing access of human carers into the facility. Consider how an event such as this in a laboratory area may impact upon the animal housing facilities in the same building.

Consider the predictable disruptions arising from an incident that may affect the functions needed to maintain an appropriate standard of animal care and research continuity.

Examples of disruptions in research animal facilities include:

- injury and death of animals
- contamination of tissue cultures
- temperature fluctuations in incubators
- inadvertent thawing and spoilage of specimens stored in freezers and refrigerators
- deviations from research protocols
- loss and corruption of data

If these or similar vulnerabilities are identified, then appropriate mitigation measures can be taken, for example, to develop a preventative maintenance program to reduce the risk of electrical and plumbing faults, to retrofit or rebuild the facilities, or to relocate animals.

Preparedness activities that protect against loss of data include timely reminders to researchers to make multiple copies of their records and to store data at multiple sites.

If you are able to evacuate:

- Identify the location of alternative housing facilities, number of animals that can be accommodated, level of protection/containment that can be provided and for how long
- Identify the minimum level of protection/containment that must be maintained during transport and how this will be achieved, including the process of transferring of animals between the facilities and the vehicles.
- Identify what vehicles will be available, how many boxes of animals will need to be moved, how many trips will be needed and the estimated journey time. Allow for slower journey times where roads are likely to be affected by smoke, water or movements of emergency vehicles.
- If you need assistance to evacuate, determine supplier and necessary details of the location f the animals, numbers to be moved, specialised transport requirements and the proposed destination.

If you cannot evacuate or your plan requires you to stay put:

- Develop appropriate response plans to combat predicted threats (such as fire and flood)

- Identify what back-up services will be available in the event of a general power failure, determine what essential services the back-up system can reliably maintain and for how long.
- Establish and maintain a store of emergency equipment including torches, fresh batteries, extension cords, portable coolers and heaters and ensure that all staff know where to access the equipment in an emergency.
- Include energy supply authorities and speciality dry ice and refrigerant supplies in the emergency telephone list.
- Estimate how long feed, clean water and bedding stores will normally last in the event of disrupted supply.

The most effective people to respond to disrupted operations at an animal care or research facility are those who regularly perform these duties under normal conditions. Personnel who regularly work in a particular area are also usually the most experienced at effective problem solving in that area.

To ensure that qualified persons will complete these tasks, an Emergency Management Plan should specify that regular care providers are the designated care providers for animals in emergencies, and they perform these duties by being given access to the facilities and by relying on existing SOPs.

Much time in writing a plan can be saved by incorporating existing SOPs as appendices to the Emergency Management Plan. The plan should identify any additional, special training needed for existing staff operating under emergency conditions and specify how this training will be delivered.

Depending upon the size and extent of the emergency, it is possible that some staff may be absent from work due to the incident and the Emergency Management Plan should allow for this.

Recovery

Emergency preparedness in the workplace seeks to reduce direct and indirect losses resulting from disasters.

Direct losses include injury and death of humans and animals, damage to buildings and equipment, loss of research data, and delays in the publication of scientific data.

Indirect losses from disasters include a loss of competitive edge in research, loss of institutional reputation and decreased local economy as trade with local vendors is reduced.

Reducing direct and indirect losses should be the overall goal of an Emergency Management Plan. Losses are smallest when the disruptions to animal welfare and research are minimised.

Recovery commences when the emergency is under control. As soon as possible an inspection should be undertaken to identify essential repairs that will enable re-activation of infrastructure.

Arrangements should be made to clean and disinfect animal rooms and retrieve evacuated animals.

The Emergency Management Plan should include necessary arrangements to ensure biological protection/containment for returning animals.