RESEARCH PROJECT

Title:

An investigation into consumption and disturbance of electrical wiring by rodent activity

Nature of problem this work is intended to address:

Fires of electrical origin are sometimes determined to have started from electrical faults such as arcs, ground faults, and high-resistance joints. These faults result in the build-up of heat, which can eventually ignite nearby combustible materials. Multiple mechanisms can cause these failures, but some fire investigations have concluded that rodents chewing through electrical insulation have been responsible.

It is believed that rodents may chew through insulation as a result of hunger, teething, or as a way to clear their movement corridors. However, no research has been published to establish under what conditions rodents may consume or otherwise disturb electrical wiring, and how.

Outline of goals and objectives:

- Under what conditions, if any, will rodents consume or disturb electrical wiring?
- Will they preferentially consume or disturb some materials, but not others?
- What is the extent of damage that they impart on wiring?
- Is the extent of damage able to cause the electrical faults responsible for fires?

Special requirements:

This project will involve working with animals and, as such, may require ethics approval.

GKA Investigations Group project supervisors:

Grey Kelly

Alexander Visotin

p. +61 2 4628 6420 f. +61 2 4628 6440 e. admin@gkaig.com.au PO Box 612, Campbelltown NSW 2560 AUSTRALIA
ABN 24 076 970 593 GKA Investigations Group is held by Greg Kelly & Associates Pty Ltd www.gkainvestigationsgroup.com.au