EXPLANATION FOR THE USE OF ANIMALS LISTED IN COLUMN E

Justification for Category E study with goats. FY2019.

Some plants that are grazed by livestock on western rangelands cause an acute toxicosis such that animals are simply found dead. In such cases, it is difficult to diagnose the cause of mortality and even if a plant is suspected to be the cause of mortality, the amount of plant material that caused the death is often unknown. Rumen samples are often collected from the dead animals to aid in the diagnosis. For this research project, plant material was administered to goats to replicate poisonings. We anticipated that these doses would be sub-lethal. The experimental plan was that as soon as the animals showed clinical signs, they would be euthanized. The goats were monitored hourly after dosing. However, it is always a possibility when dosing poorly characterized poisonous plants to livestock for the first time that animals may die sooner than anticipated, as the toxic dose is not known. Due to the fact that death, although not expected, was a potential outcome, this research was classified as pain Category E. All efforts were made to ensure that no undue pain or distress was caused to the animals, the experimental protocol was followed with the appropriate monitoring; however, four goats died before they were able to be euthanized, thus they were reported as category E.

EXPLANATION FOR THE USE OF ANIMALS LISTED IN COLUMN E

Justification for Category E study with mice. FY2019.

The four category E mice were part of a carcinogenicity study to determine if subclinical dehydropyrrolizidine alkaloid treatment increases neoplastic transformation. All four mice were dosed with dehydropyrrolizidine alkaloids between 6 and 12 months prior to their deaths. These four mice are part of more than 100 mice that were part of this experimental study. All animals on these studies were closely examined according to protocol. The protocol states that any animal that develops minimal clinical signs (weight loss, loss of appetite, failure to groom etc) are euthanized and necropsied. These 4 mice died suddenly without developing any evidence of clinical disease. Such deaths are encountered with similar incidence in our untreated breeding colony. The cause of death in our breeding colony is often not apparent at necropsy or from microscopic studies. This suggests some deaths are likely due to some arrhythmia or some other functional cardiac disease. Such deaths are probably the effect of aging and are natural causes of death in old mice. As microscopic studies of these 4 animals are not complete the cause of death is yet undetermined; however, these four deaths are likely due to similar reasons as the aged mice in the breeding colony. However, as these mice were treated and found dead unexpectedly, we have classified them as category E.