



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

FOR US POSTAL SERVICE DELIVERY:

Office of Laboratory Animal Welfare
6700B Rockledge Drive, Suite 2500, MSC 6910
Bethesda, Maryland 20892-6910
Home Page: <http://grants.nih.gov/grants/olaw/olaw.htm>

FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare
6700B Rockledge Drive, Suite 2500
Bethesda, Maryland 20817
Telephone: (301) 496-7163
Facsimile: (301) 480-3387

June 21, 2021

Re: Animal Welfare Assurance
A3668-01 [OLAW Case 1U]

Dr. James P. Thompson
Dean and Institutional Official for Animal Care
The University of Tennessee
2407 River Drive, (b) (4) Teaching Hospital
Knoxville, TN 37996-4550

Dear Dr. Thompson,

The Office of Laboratory Animal Welfare (OLAW) acknowledges receipt of your June 11, 2021 letter reporting a noncompliance with the PHS Policy on the Humane Care and Use of Laboratory Animals at the University of Tennessee - Knoxville. According to the information provided, it is understood that on the evening of Sunday, May 9, and continuing through the afternoon of May 15, 2021, a university-scheduled steam outage, to repair and replace aging infrastructure, took place. Sufficient heat could not be provided to three laboratory animal facilities and two approved animal satellite-housing areas, due to unseasonably cold weather. Despite mitigation efforts including increasing the discharge air temperature setting on the air handlers, providing portable heaters, etc., temperatures could not be maintained in some larger animal holding rooms within ranges specified in the *Guide*. There were no animal morbidities or mortalities, however potential cold stress may have had effects on animal research. Some animal-related research included federally funded projects.

Corrective and preventive actions included the University Attending Veterinarian meeting with the Director of Facility Services to discuss strategies to provide more robust heat when a planned or unexpected steam outage occurs in the future.

OLAW believes that the corrective and preventive measures by the University of Tennessee - Knoxville are consistent with the provisions of the PHS Policy on Humane Care and Use of Laboratory Animals for institutional self-monitoring, self-correction, and self-reporting. Based on the information provided, OLAW is satisfied that appropriate and reasonable actions were taken to protect animal health and welfare and also to mitigate future similar situations. OLAW concurs that the incident warranted reporting. We appreciate being informed of this matter and find no cause for further action by this office.

Sincerely,

Brent C. Morse -S

Digitally signed by Brent C. Morse

-S

Date: 2021.06.22 11:44:38 -04'00'

Brent C. Morse, DVM

Director

Division of Compliance Oversight

Office of Laboratory Animal Welfare

cc: IACUC contact

Friday, June 11, 2021

Brent Morse, DVM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
Rockledge 1, Suite 360
6705 Rockledge Drive
Bethesda, MD 20892

Dear Dr. Morse:

The University of Tennessee Knoxville, in accordance with Assurance D16-00397 and PHS Policy IV.F.3 provides this report of a programmatic failure related to animal facilities environmental temperature regulation which occurred during a scheduled campus-wide steam outage. There were no animal morbidities or mortalities, however the cold stress from the room temperature deviation potentially had effects on on-going biomedical animal research. Some animal-related research on federally funded projects may have been impacted. Principal Investigators were kept aware of the issue throughout the steam outage.

The university-scheduled steam outage, to repair and replace aging infrastructure, began the evening of Sunday, May 9, and continued through the afternoon of May 15, 2021. This outage affected the ability to provide heat to buildings across the majority of campus, including three of our laboratory animal facilities and two approved animal satellite-housing areas. Increasing the discharge air temperature setting on the air handlers was done in advance of the outage. Supplemental heat was available through portable heaters with temperature settings to minimize the expected colder room temperatures due to absent steam. Regrettably, outdoor temperatures in Knoxville were unseasonably cold and dipped into the 40s many nights during the week, making the portable heating units inadequate in some larger animal holding rooms.

Many people in the Animal Care Program worked overtime and late hours to address the cold temperatures. Efforts to increase the number of portable heaters in affected rooms to achieve required environmental temperatures overwhelmed electrical circuits causing localized power outages in some locations. Once power was restored, use of single heaters was resumed which offset, but could not restore the temperature drop to required specifications within *The Guide*.

Additional mitigation steps included relocating some dogs to an unaffected building, pair housing and providing blankets to remaining dogs, and banking free-roaming cats so they were in closer proximity to the heat source and in contact with their plush bedding. Most rodents are housed in static micro-isolator cages with only a limited population housed in individually ventilated caging. All rodents are housed with bedding and most are group housed with nesting material (i.e., Nestlet or Enviro-dri), unless an exclusion for scientific justification is in place. We do not have specialized equipment to determine internal cage temperature, however there was no visible evidence of stress observed among the rodents. Most, if not all rodents, were taking advantage of their nesting material and it is likely the local bedding temperature was higher than room temperature.

With these measures taken, we still failed to meet *The Guide's* recommended macro-environmental temperatures for some of our laboratory animals. Most rodent rooms and cubicles dropped below 68°F, reaching lows of 64-65°F during the overnight hours. A few small cubicle rooms were able to stay within the normal range with one heater, without overheating the room. Dog and cat rooms were also able to stay within the normal range with one heater, likely due to the wider acceptable range.

The University Attending Veterinarian has met with the Director of Facility Services to discuss strategies to provide more robust heat when a planned or unexpected steam outage occurs in the future. This may involve electrical rewiring to accommodate larger or multiple heat sources and/or installing electric heaters within the ductwork, as appropriate, for some locations.

The University of Tennessee has a strong commitment to protecting animal welfare in all research and teaching protocols. The assistance and guidance provided by OLAW to support this effort is appreciated. Please contact Dr. Melinda Hauser (mhauser@utk.edu; (b) (6)), IACUC Director and Chair, should you have any questions regarding this report.

Sincerely,

(b) (6)

James P. Thompson, DVM, PhD
Dean and Institutional Official, IACUC

cc: Gary L. Borkowski, DVM, MS, AAALAC International Global Director
Dr. Melinda Hauser, Director and IACUC Chair
Dr. Lori Cole, University Attending Veterinarian

Morse, Brent (NIH/OD) [E]

From: Morse, Brent (NIH/OD) [E]
Sent: Monday, June 14, 2021 3:29 PM
To: Thompson, Jim (Jim)
Cc: gborkowski@aaalac.org; Hauser, Melinda R; Cole, Lori Scheyd
Subject: RE: UTK Assurance D16-00397 - Programmatic Failure Self-Report

Thank you for this report Dr. Thompson. We will send an official response soon.

Best regards, Brent Morse

Brent C. Morse, DVM, DACLAM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health

From: Thompson, Jim (Jim) <jthomp70@utk.edu>
Sent: Monday, June 14, 2021 2:37 PM
To: Morse, Brent (NIH/OD) [E] <morseb@mail.nih.gov>
Cc: gborkowski@aaalac.org; Hauser, Melinda R <mhauser@utk.edu>; Cole, Lori Scheyd <lcole21@utk.edu>
Subject: UTK Assurance D16-00397 - Programmatic Failure Self-Report

Friday, June 11, 2021

Brent Morse, DVM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
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James P. Thompson, DVM, PhD
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