DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

FOR US POSTAL SERVICE DELIVERY:
Office of Laboratory Animal Welfare
Rockledge One, Suite 360
6705 Rockledge Drive B MSC 7982
Bethesda, Maryland 20892-7982
Home Page: http://grants.nih.gov/grants/olaw/olaw.htm

FOR EXPRESS MAIL:
Office of Laboratory Animal Welfare
Rockledge One, Suite 360
6705 Rockledge Drive
Bethesda, Maryland 20817
Telephone: (301) 496-7163
Facsimile: (301) 480-3387

August 23, 2021

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

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 August 10, 2021 letter reporting a serious deviation from the provisions of the *Guide for the Care and Use of Laboratory Animals* at the University of Tennessee- Knoxville. According to the information provided, OLAW understands that 112 of 347 chickens died after the air-handler failed. The chickens had been housed on topsoil which generated excessive airborne particulates which clogged the air filters. Filters had been changed three times per week but the system still became clogged and the system alarm failed to send out notification to personnel. Also, the room temperature alarm alert range was not correctly set.

The immediate action taken upon discovery consisted of the veterinarians assessing the remaining live chickens, which survived, and propping the doors open. The corrective actions consisted of resetting the air-handler, placing all components of the heating, ventilation, air conditioning (HVAC) system on alarm alerts, and setting the correct temperature ranges. Exhaust fans were installed in the wall which by pass the air-handler and the entire HVAC system will undergo major upgrades in 2022. No animals will be housed in the room until the Institutional Animal Care and Use Committee (IACUC) has inspected it.

Based on its assessment of this explanation, OLAW understands that measures are underway to correct and prevent recurrence of this problem. OLAW concurs with the actions taken by the institution to comply with the PHS Policy on Humane Care and Use of Laboratory Animals. We assume that the surviving chickens were transferred to appropriate housing facilities, approved by the IACUC. Please update this Office on the status of the HVAC repairs in the Annual Report to OLAW following completion. Thank you for informing OLAW about this matter.

Sincerely,

(b) (6)

Axel Wolff, M.S., D.V.M.
Deputy Director
Office of Laboratory Animal Welfare

cc: IACUC Chair

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A3668-IV

UTCVM
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

Institutional Animal Care & Use Committee
Third Creek Building
2415 Fletcher Luck Lane Office 225
Knoxville, TN 37996
office: 865-974-5548
iacuc.utk.edu

Tuesday, August 10, 2021

Brent Morse, DVM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
Rockledge 1, Suite 360, MSC 7982
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 facility ventilation and temperature regulation adherence failure as a self-report to established provisions of *The Guide.*

On Sunday, July 18, 2021, a research team conducting its daily poultry health check at the Johnson Research and Teaching Unit (JRTU) discovered an excessively warm, humid, animal research room with a strong ammonia odor. The cause of the excessive heat, humidity, and odor was the result of a failed air-handler. The room contained 347 nine-week-old broiler chickens, of which 112 were found dead. This was a privately funded research study.

The cause of the air-handler failure was considered related to topsoil used as an absorbent litter substrate; this substrate was considered important for the research needs of this study. During the course of the study, it was apparent the topsoil generated more airborne particles than other absorbent litter substrates. While changing the air filters three times weekly (M, W, F) had successfully supported air-handler function, on Sunday, July 18 facility services personnel (FSP) found the filters blocked with particulates, likely preventing normal air-handler function and triggering the unit failure. Despite the air-handler failure, an alarm was not sent to the building manager or attending veterinarian (AV) as normally occurs with mechanical failures; thus, the exact failure time is unknown. Also, the room temperature alarm alert range was inappropriately set from 68-95°F and although the room temperature was within range, it was out-of-range for nine-week-old boilers. No other rooms or hallway corridors within the building were affected. Once FSP addressed the air-handler failure, the research team safely entered the room to perform their health checks. The mortalities were discovered and the building manager and AV contacted. The AV and another IACUC veterinarian assessed the remaining animals that afternoon. No animals required euthanasia. Doors to the room remained open to the secure corridor to ensure adequate ventilation during the remaining three days of the research study, in case a second failure of the air-handler system occurred.

Additional mitigation steps included instructing FSP to include all air-handler, boiler, and chiller failures on alarm alerts, along with ensuring the correct animal-husbandry environmental temperature ranges. This was completed July 20, 2021. The aged JRTU HVAC system is on the approved university budget for capital maintenance repair. The project is scheduled for completion in calendar year 2022. In order to support near-term use of this room for poultry teaching and research, FSP are installing exhaust fans on an exterior wall to ventilate the room, bypassing the current room exhaust via the air-handler unit. Air filters will no longer be necessary in this room. This is still in the design phase and is expected to be completed before the end of this current calendar year. No animals will be housed in the room until the IACUC conducts an inspection following the installation of the exhaust fans.

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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; [redacted] (b) (6), IACUC Director and Chair, should you have any questions regarding this report.

Sincerely,

[redacted] (b) (6)

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

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

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Morse, Brent (NIH/OD) [E]

From: Morse, Brent (NIH/OD) [E]
Sent: Wednesday, August 11, 2021 9:18 AM
To: Thompson, Jim (Jim)
Cc: Hauser, Melinda R; Cole, Lori Scheyd
Subject: RE: UTK Assurance D16-00397 - Ventilation and Temperature Regulation 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: Tuesday, August 10, 2021 4:05 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 - Ventilation and Temperature Regulation Failure Self-Report

Tuesday, August 10, 2021

Brent Morse, DVM
Director, Division of Compliance Oversight
Office of Laboratory Animal Welfare
National Institutes of Health
Rockledge 1, Suite 360, MSC 7982
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James P. Thompson, DVM, PhD
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