

Memorandum to: Richard Best, Director of Compliance, Institutional Official
From: Institutional Animal Care and Use Committee
Subject: Semiannual Report of the Animal Care and Use Program Review
Date: December 12, 2019

This report summarizes the IACUC's results of its most recent program review and facility inspection, as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals ([Policy](#)), Section [IV.B.1.-3.](#), the *Guide for the Care and Use of Laboratory Animals* ([Guide](#)), and the Animal Welfare Act ([AWA](#)) regulations, as applicable. Submission of semiannual reports to the Institutional Official is a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW).

I. Description of the Nature and Extent of the Institution's Adherence to the PHS Policy, the *Guide*, and the AWA

Departures from the PHS Policy, the *Guide*, and the AWA.

Select A or B:

- ☐ A. There were no departures during this reporting period.
☒ **B. The departures have been reviewed and approved by the IACUC. See table at end of document.**

**II. Deficiencies in the Institution's Animal Care and Use Program
Animal Care and Use Program Review Date(s): November 21**

Select A or B:

- ☒ **A. There were no deficiencies in the program during this reporting period.***
☐ **B. The following deficiencies have been identified:**

Areas for Improvement

Status of Continuing improvements since the last Semiannual Program Review Report:

In response to the AAALAC suggestion for improvement (SFI) that that all personnel in contact with animals should have a periodic (annual) occupational health check to see if any changes have occurred in exposure or health status. Currently, there is no mechanism in which animal handlers are contacted to prompt them to update their occupational health forms. The CVM and EHS have worked together to implement a program in which the Human Resources for each college will be

responsible for sending out batched e-mails to personnel to prompt any personnel working with animals to update the form. Implementation of the plan would begin at the CVM, and eventually move to CALS. Dr. McKeon will update the committee on the progress of this plan.

As an update for the mares housed at client owned farms, the self-inspection checklist has been refined so that questions pertain directly to recipient mare farms. The checklists were sent out by the IACUC office to be completed by the farms, and Dr. McKeon and the ad-hoc committee will perform inspections onsite of the farms early 2020.

III. Deficiencies in the Institution's Animal Facilities

Animal Facility/Lab Inspection Date(s): Multiple dates: July 8, July 9, July 10, July 23, September 9, September 10, October 2, October 7, October 8, October 9, November 5, November 6, November 13

- ☐ A. There were no deficiencies in the animal facilities during this reporting period.
- ☒ B. The following deficiencies were noted in animal facilities during this reporting period. Also included are approved plans and schedules for correction approved during this reporting period for deficiencies noted during the previous reporting period.

See attached

Minority Views

Select A or B:

- ☒ A. No minority views were submitted or expressed.
- ☐ B. The following minority views were expressed:

IV. Status of AAALAC Accreditation

The College of Veterinary Medicine is accredited.
The College of Sciences is accredited.

Active IACUC Approved Departures to Standards Specified by the AWA, the *Guide* or the *Ag Guide*

ID#	Standard	Species	IACUC-Approved Exception
19-016-B	Guide pg 59	Dog	Housed in cages with lowered lids to prevent hip injury in post-surgical model
17-138B	9CFR Ch.1. Pt.2, Subpt. F. Sec. 3.128	Pig	Post-surgical housing and subsequent Farrowing housing used does not meet space requirements
18-014B	9CFR Ch.1. Pt.2, Subpt. F. Sec. 3.128	Pig	Farrowing housing used does not meet space requirements
19-070B	Guide pg 51	Mice	Housed on wire flooring while dosed with chemotherapeutics
19-524	Guide pg 106	Mouse	Pet store procurement but not housed in university facility so no risk to facility animals

Plan and Schedule for Correction of Deficiencies

Facility				
Date of Inspection	July 30, 2019			
DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
<i>Deficiency(ies) are described below</i>	<i>Minor/ Significant</i>	<i>-Replacement -Renovation or Repair -Modification of Policies or SOPs -Other</i>	<i>Proposed Scheduled Date(s) of Corrective Action (Start/Finish)</i>	<i>Deficiency Confirmed Corrected by IACUC (date and by whom)</i>
<p>This room was re inspected due to the comments / suggestions mentioned during the inspection on July 9, 2019. There was no odor in the hallway outside the room. However, there the odor was increased inside the room. This may have been related to the fact that the inspection was done before the room was cleaned. The deficiency noted is it appears that the batteries in use were designed to house either one or two birds and in every case there were at least two or three birds. This created a situation in most of the pens in which the birds could not move without coming into contact with each other and there appeared to be insufficient space for most of the birds in a pen to eat and drink ad libitum. In several pens, one bird, presumably the one at the bottom of the peck order, appeared to be lethargic and covered with fecal material. Moreover, when one bird laid down in the bottom of the cage space was limited and the</p>	S	<p>██████ – 8/18/19 - The birds housed in ██████ are covered under protocol 18-172A and are from the populations being selected for genetic markers associated with immune response (high and low). The birds in ██████ were 12 weeks of age when the reinspection occurred, just prior to the planned population cull to the parents for the subsequent generation (highest/lowest responders).</p> <p>Genetic analysis of the birds in ██████ was received on July 31, and unselected birds were culled the same day. The number of birds was reduced to the current number (109).</p> <p>Bird numbers were reduced to one bird per pen. Several cages have had the divider removed and have double the space and house 2-3 hens. Birds will soon come into lay and we will begin artificial insemination to produce the next generation. The males selected to be the sires of the next generation will be evaluated for semen production and any inferior males will also be culled.</p>	<p>Corrective action was made on July 31, 2019 and was completed on that date. Air flow in ██████ bird rooms is being evaluated by an outside analysis prior to University Facilities determination of the best course of action to improve air flow/exhaust.</p>	<p>**update-8/21/2019</p> <p>When the selection cull was performed on July 31, the maximum number of hens were retained. This was mistakenly reported to be 2 hens per double pen, but there were actually double pens that housed 3 hens. The cages in ██████ provide 216 sq inches of floor space. The birds housed in ██████ are hybrid crosses and are significantly smaller than standard broiler breeders, but are larger than medium-weight layers. The Ag guide only provides specifics for broiler breeders</p>

<p>other bird or birds had to stand on top of the bird that was laying down. The number of birds in each pen and in the entire room should be evaluated and reduced accordingly, especially in light of the on-going challenges associated with the ventilation system in this room and in the animal wing of [REDACTED] in general.</p>				<p>and medium-weight layers.</p> <p>Twelve double cages in 280 have 3 hens per cage. This density provides 144 sq inches per bird. The Ag Guide specifies 83 sq inches per medium-weight layer hens, and 180 sq inches for broiler breeder hens (>2.3kg). These hens currently average 1.6 kg and the closest floor space specification is for young broilers in cages at similar size/weight, which is 109 sq inches per bird. Currently these hens have sufficient freedom of movement to be able to turn around, get up, lie down and groom.</p>
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Facility				
Date of Inspection	March 6, 2019			
DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
<i>Deficiency(ies) are described below</i>	<i>Minor/ Significant</i>	<i>-Replacement -Renovation or Repair -Modification of Policies or SOPs -Other</i>	<i>Proposed Scheduled Date(s) of Corrective Action (Start/Finish)</i>	<i>Deficiency Confirmed Corrected by IACUC (date and by whom)</i>
The roof on the [REDACTED] is damaged in many places with metal roofing material missing and/or flapping in the wind. Additionally, the wood truss in one section of [REDACTED] is damaged. A gate has been put up so that animals cannot be access this section to prevent possible injury to them. There are small holes in the roofing throughout this building. This roof needs to be repaired or replaced to prevent potential injury to animals and personnel working in the area.	M	The [REDACTED] has been a topic of our ongoing repair lists. I have begun to gather quotes for these repairs to be made by a roofing contractor. These notes have been shared with the Assistant Director of NCARS. Together we are working on a plan to get this building fixed. MV	Start - March 2019 – finish asap, pending available funding	9/17/2019: unit is still working on the action plan for the [REDACTED] roof and endwall repair. 11/21/2019: One of the [REDACTED] [REDACTED] is in poor structural condition and was noted as a Minor Deficiency during the last IACUC inspection of the facility. The unit is currently moving forward with plans to renovate [REDACTED]

Facility				
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<p>The issue of falling ceiling insulation was noted as a minor deficiency on a previous semiannual inspection and those problem areas of insulation were removed. There were new areas of the ceiling's insulation that are torn and falling down that should be removed/repared.</p> <p>A section of [REDACTED] where animals are held, was wobbling and the anchor bolts need to be replaced to stabilize the gate and to keep it from falling down.</p>	M	<p>Repair ceiling Insulation will continue to be removed as sections come loose</p> <p>Pen will be repaired Concrete anchors and welding</p>	<p>BiMonthly</p> <p>To be completed May 2019</p>	<p>11 Sept 2019: insulation repair continues to be corrected on an as needed basis</p>


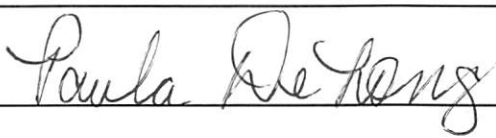




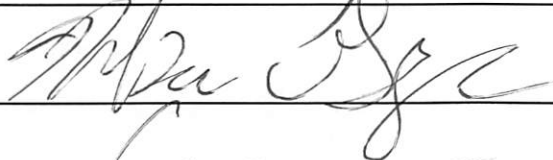
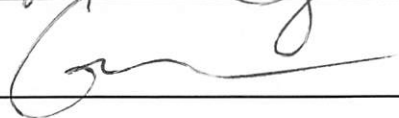
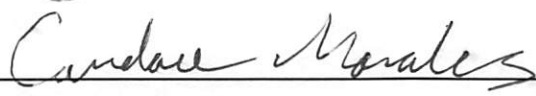
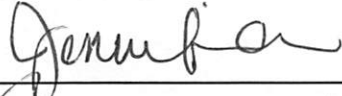

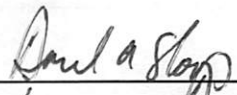

Facility				
Date of Inspection	April 17, 2019			
DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
<i>Deficiency(ies) are described below</i>	<i>Minor/ Significant</i>	<i>-Replacement</i> <i>-Renovation or Repair</i> <i>-Modification of Policies or SOPs</i> <i>-Other</i>	<i>Proposed Scheduled Date(s) of Corrective Action (Start/Finish)</i>	<i>Deficiency Confirmed Corrected by IACUC (date and by whom)</i>
<p>██████████: The parameter doors in ██████████ are rusting out and are not sealing properly at the bottom. This can allow vermin to come in from the outside. These old doors should be repaired or replaced. There are other doors ██████████ that will soon need replacement but they are not quite as far along as the doors note above. There should be a plan in place for replacing deteriorating doors for the animal rooms.</p> <p>██████████ The light covers in some of the rooms also need to be replaced as they are broken or cracked. There should be a plan in place to maintain these fixtures.</p> <p>██████████: Per the last semiannual inspection report (October 22, 2018) a minor deficiency was noted in regards to the lack of a dedicated manager at ██████████ to ensure proper housekeeping, upkeep, and maintenance as well as biosecurity measures. The response for that issue</p>	M	<p>Replacement of doors in ██████████ has been completed.</p> <p>Light cover replacement/repair ██████████ completed.</p>	<p>Oct 9, 2019</p> <p>Sept 10, 2019</p>	<p>11/21/2019: An updated plan for the ██████████ was presented. The faculty liaison and the unit manager for the ██████████ are unable to manage this location due to biosecurity concerns, so a new manager was hired to specifically oversee ██████████.</p> <p>██████████ She has started working on facility SOP's and will act as a point</p>

<p>for the last report indicated the PIs working in this building were working on potential ideas for how to staff the area. Things have not improved for this area of the building since the October 2018 inspection noted deficiency. A plan needs to be implemented for dedicated personnel to oversee the overall use of this facility.</p> <p>10/15/2019: this was still noted as an open item on the self-evaluation checklist</p>				<p>of contact for PI's utilizing this space.</p>
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Signatures: NCSU IACUC's semiannual evaluation of the Animal Care and Use Program was completed by a convened quorum on November 21, 2019 and the final report approved and verified with the signatures below on December 12, 2019. All current voting members of the committee have had an opportunity to review this semiannual program report to the Institutional Official.

Printed Names of Voting Members of the IACUC

Signatures

Kenneth Anderson	
Paula DeLong	
Christopher DePerno	
Robert Elder	
William Flowers	
John Gadsby	
Nneka George	
Gabriel McKeon	
Candace Morales	
Jennifer Dew	
Paul Siciliano	
David Sloop	
Steven Suter	
Susan Tonkonogy	