

**Memorandum to:**

**From:**

*Institutional Animal Care and Use Committee*

**Subject:**

*Semiannual Report of the Program Review and Facility Inspection*

**Date:**

*Tuesday, November 16, 2020*

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).

**Since the last review, the following changes have occurred in the institution's program for animal care and use (PHS Policy [IV.A.1.a.-i.](#)): [optional]**

N/a

**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 following departures have been reviewed and approved by the IACUC: *[include reason for each departure]*

N/a

**II. Deficiencies in the Institution's Animal Care and Use Program**

Animal Care and Use Program Review Date(s):

Select A or B:

- ☒ A. There were no deficiencies in the program during this reporting period.  
☐ B. The following deficiencies have been identified: *[describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

N/a

### III. Deficiencies in the Institution's Animal Facility

Animal Facility Inspection Date(s):

Select A or B:

- ☐ A. There were no deficiencies in the animal facility during this reporting period.
- ☒ B. The following deficiencies have been identified: *[describe each deficiency, identify each deficiency as either minor or significant, and provide a reasonable and specific plan and schedule for the correction of each deficiency, deficiencies may be recorded on a separate table and attached, the last page of OLAW's Sample Semiannual Program Review and Facility Inspection Checklist provides a sample table]*

1) Deficiency #1

- a. Category: minor
- b. Location: Janitors closet rm [REDACTED]
- c. Deficiency description: Ceiling tile out of place inside facility's janitor's closet/laundry room.
- d. Responsible party: Facility Director
- e. Correction schedule: Submitted work order to have maintenance put ceiling tile back in place. Tiles are typically moved by building engineers when troubleshooting HVAC system. (corrected immediately)

2) Deficiency #2

- f. Category: minor
- g. Location: [REDACTED] Lab - [REDACTED]
- h. Deficiency description: Refrigerator plugged into extension cord/power strip. Panini toaster on same bench with chemicals used in lab.
- i. Responsible party: [REDACTED] & lab members
- j. Correction schedule: During inspection, occupation safety officer [REDACTED] noted that refrigerator should be plugged directly into outlet on wall rather than into a power strip. Facility director notified lab immediately and had them correct this, in addition to removing panini toaster from lab bench. (corrected immediately)

3) Deficiency #3

- k. Category: minor
- l. Location: [REDACTED]
- m. Deficiency description: Keys to small narcotics cabinet inside lab were left in unlocked drawer.
- n. Responsible party: [REDACTED] & lab members
- o. Correction schedule: Facility director removed keys from drawer and notified lab member [REDACTED] as instructed to pick up keys from BRF office on [REDACTED] and to ensure keys remained in a locked drawer. (corrected on 11/17/20)

### IV. Minority Views

Select A or B:

- ☒ A. No minority views were submitted or expressed.
- ☐ B. The following minority views were expressed: *[insert minority views here or attach]*

N/a

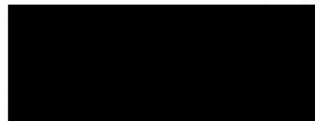
**V. Status of AAALAC Accreditation** [*identify accredited facilities, if applicable*]



**VI. Signatures** [*signatures of a majority of the IACUC members required by AWAR (§2.31,c,3), if applicable*]

Names of IACUC Members	Signatures

Digitally signed by



College of Optometry

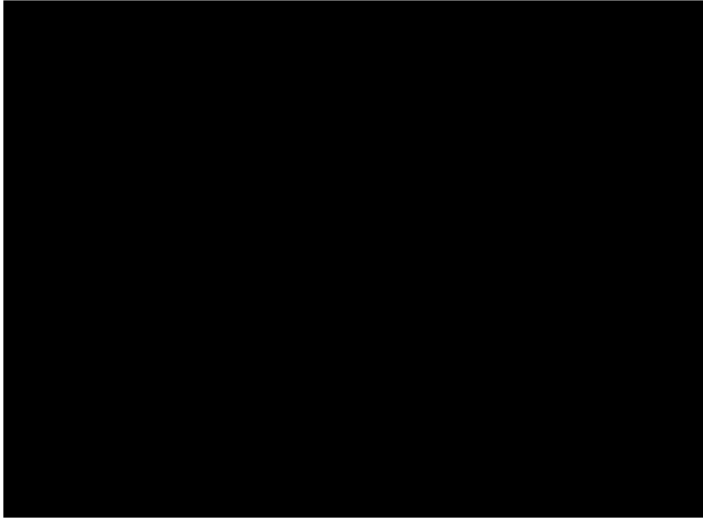
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**Date of Semiannual Inspection: November 16, 2020**

**Names of IACUC Members**

**Signatures**

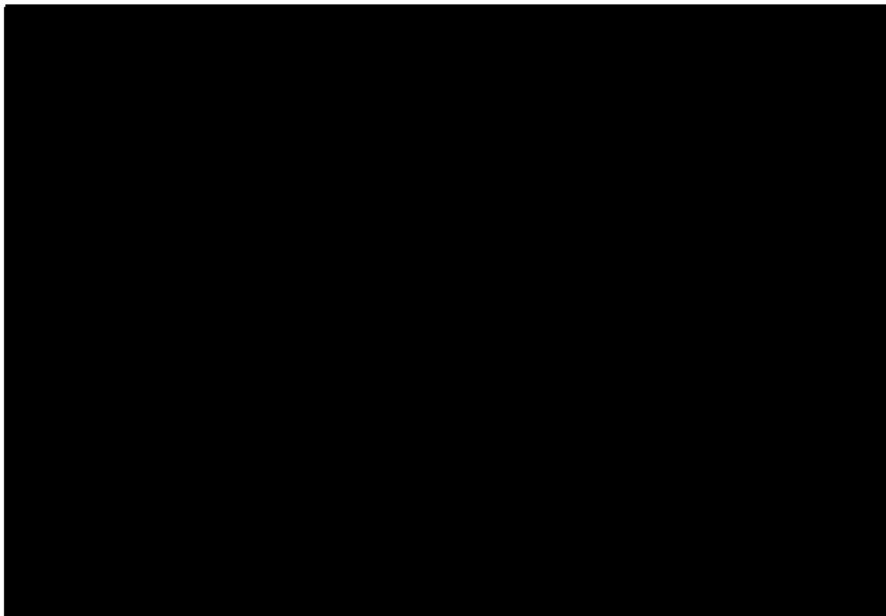




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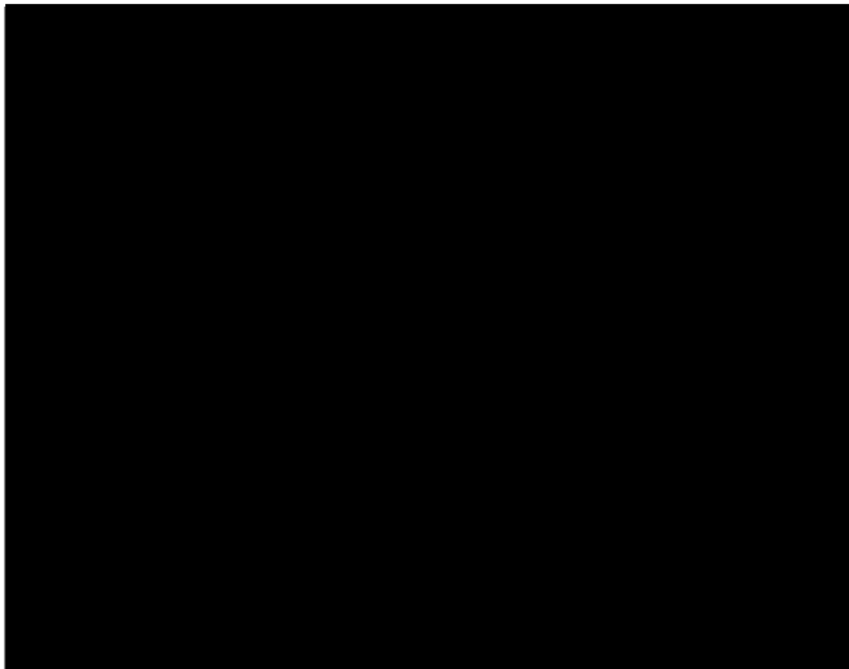
**Signatures**



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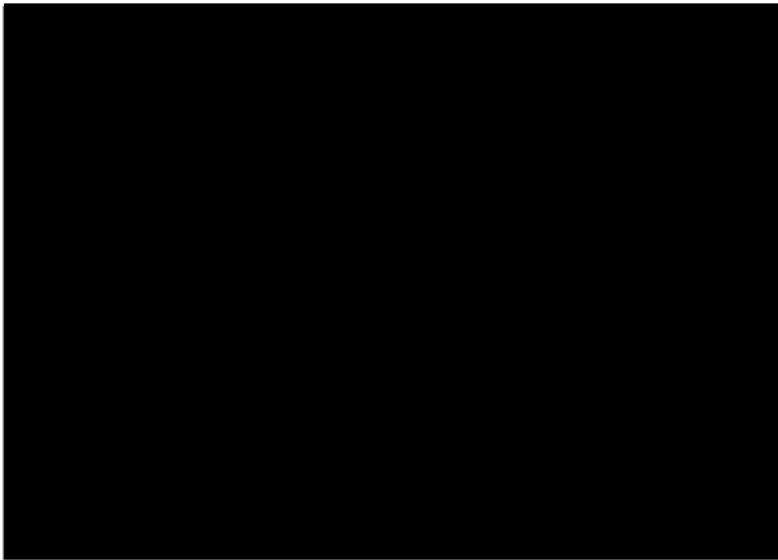
**Signatures**



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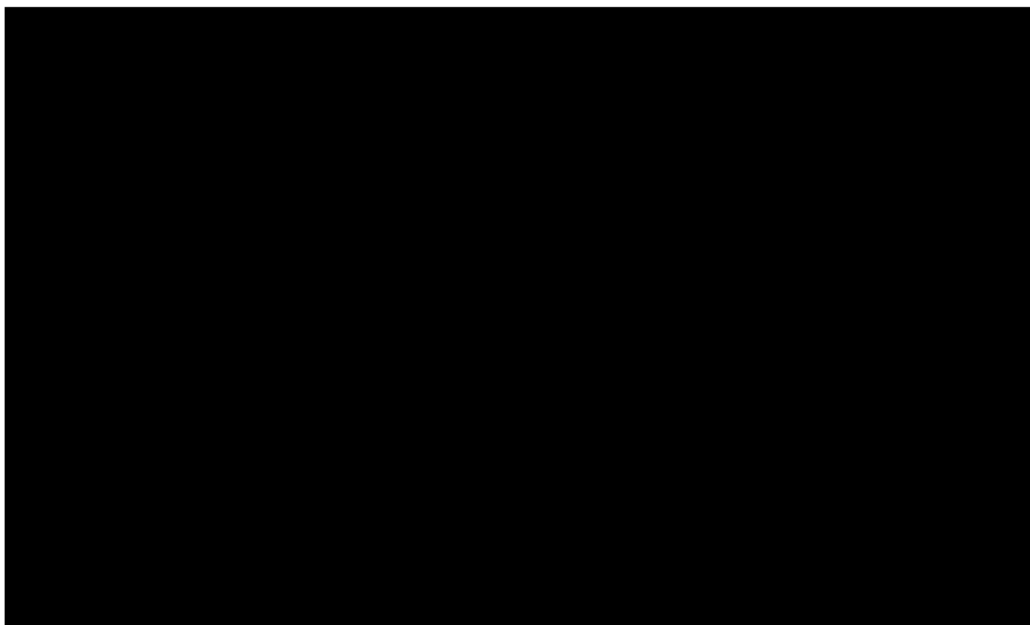
**Signatures**



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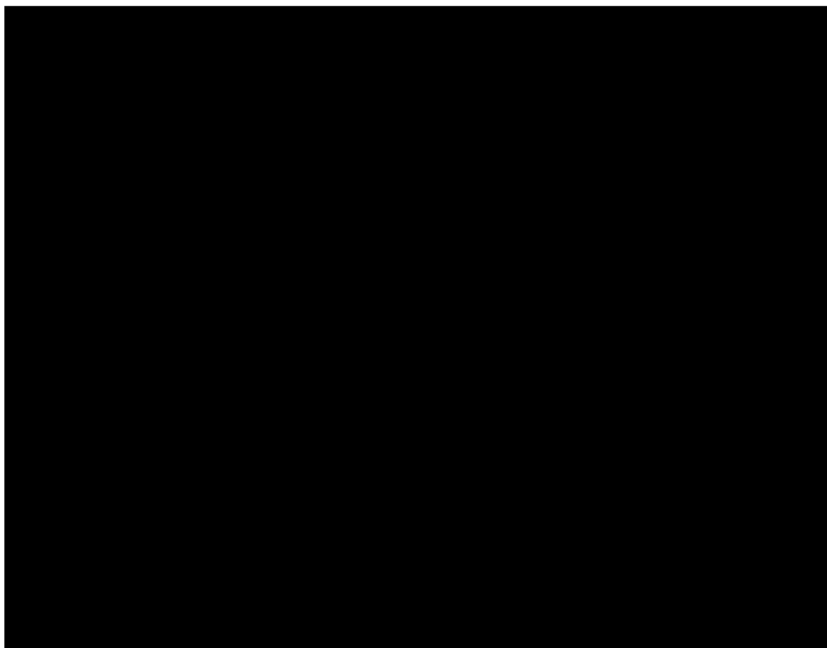
**Signatures**



**Date of Semiannual Inspection: November 16, 2020**

**Names of IACUC Members**

**Signatures**



# I. Semiannual Program Review Checklist<sup>i</sup>

## Institutional Policies and Responsibilities

Date: 11/16/20

1. Animal Care and Use Program <sup>NEW</sup>		A*	M	S	C	NA
• Responsibility for animal well-being is assumed by all members of the program ( <i>Guide, p 1</i> ) <b>[must]</b>		X				
• IO has authority to allocate needed resources ( <i>Guide, p 13</i> )		X				
• Resources necessary to manage program of veterinary care are provided ( <i>Guide, p 14</i> ) <b>[must]</b>		X				
• Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the <i>Guide</i> ( <i>Guide, pp 11, 15</i> )		X				
• Program needs are regularly communicated to IO by AV and/or IACUC ( <i>Guide, p 13</i> )		X				
• Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site ( <i>Guide, p 14</i> ) <b>[must]</b>		X				
2. Disaster Planning and Emergency Preparedness <sup>NEW</sup>		A*	M	S	C	NA
• Disaster plans for each facility to include satellite locations are in place ( <i>Guide, p 35, p 75</i> ) <b>[must]</b>		X				
• Plans include provisions for euthanasia ( <i>Guide, p 35</i> ) <b>[must]</b>		X				
• Plans include triage plans to meet institutional and investigators' needs ( <i>Guide, p 35</i> )		X				
• Plans define actions to prevent animal injury or death due to HVAC or other failures ( <i>Guide, p 35</i> )		X				
• Plans describe preservation of critical or irreplaceable animals ( <i>Guide, p 35</i> )		X				
• Plans include essential personnel and their training ( <i>Guide, p 35</i> )		X				
• Animal facility plans are approved by the institution and incorporated into overall response plan ( <i>Guide, p 35</i> )		X				
• Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place ( <i>Guide, p 35</i> )						X
3. IACUC <sup>NEW</sup>		A*	M	S	C	NA
• Meets as necessary to fulfill responsibilities ( <i>Guide, p 25</i> ) <b>[must]</b>		X				
• IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions ( <i>Guide, p 26</i> ) <b>[must]</b>		X				
• Continuing IACUC oversight after initial protocol approval is in place ( <i>Guide, p 33</i> )		X				
• IACUC evaluates the effectiveness of training programs ( <i>Guide, p 15</i> )		X				
4. IACUC Protocol Review - Special Considerations		A*	M	S	C	NA
• Humane endpoints are established for studies that involve tumor models, infectious diseases, vaccine challenge, pain modeling, trauma, production of monoclonal antibodies, assessment of toxicologic effects, organ or system failure, and models of cardiovascular shock ( <i>Guide, p 27</i> )		X				
• For pilot studies, a system to communicate with the IACUC is in place ( <i>Guide, p 28</i> )		X				
• For genetically modified animals, enhanced monitoring and reporting is in place ( <i>Guide, p 28</i> )		X				
• Restraint devices are justified in the animal use protocols ( <i>Guide, p 29</i> ) <b>[must]</b>		X				
• Alternatives to physical restraint are considered ( <i>Guide, p 29</i> )		X				
• Period of restraint is the minimum to meet scientific objectives ( <i>Guide, p 29</i> )		X				
• Training of animals to adapt to restraint is provided ( <i>Guide, p 29</i> )		X				
• Animals that fail to adapt are removed from study ( <i>Guide, p 29</i> )		X				
• Appropriate observation intervals of restrained animals are provided ( <i>Guide, p 29</i> )		X				
• Veterinary care is provided if lesions or illness result from restraint ( <i>Guide, p 30</i> ) <b>[must]</b>		X				
• Explanations of purpose and duration of restraint are provided to study personnel ( <i>Guide, p 30</i> )		X				
• Multiple surgical procedures on a single animal are justified and outcomes evaluated ( <i>Guide, p 30</i> )		X				



# I. Semiannual Program Review Checklist<sup>i</sup>

## Institutional Policies and Responsibilities

Date: 11/16/20

1. Animal Care and Use Program <sup>NEW</sup>	A*	M	S	C	NA
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• IO has authority to allocate needed resources ( <i>Guide, p 13</i> )	X				
• Resources necessary to manage program of veterinary care are provided ( <i>Guide, p 14</i> ) <b>[must]</b>	X				
• Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the <i>Guide</i> ( <i>Guide, pp 11, 15</i> )	X				
• Program needs are regularly communicated to IO by AV and/or IACUC ( <i>Guide, p 13</i> )	X				
• Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site ( <i>Guide, p 14</i> ) <b>[must]</b>	X				

2. Disaster Planning and Emergency Preparedness <sup>NEW</sup>	A*	M	S	C	NA
• Disaster plans for each facility to include satellite locations are in place ( <i>Guide, p 35, p 75</i> ) <b>[must]</b>	X				
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• Plans include triage plans to meet institutional and investigators' needs ( <i>Guide, p 35</i> )	X				
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• Plans include essential personnel and their training ( <i>Guide, p 35</i> )	X				
• Animal facility plans are approved by the institution and incorporated into overall response plan ( <i>Guide, p 35</i> )	X				
• Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place ( <i>Guide, p 35</i> )					X

3. IACUC <sup>NEW</sup>	A*	M	S	C	NA
• Meets as necessary to fulfill responsibilities ( <i>Guide, p 25</i> ) <b>[must]</b>	X				
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• Continuing IACUC oversight after initial protocol approval is in place ( <i>Guide, p 33</i> )	X				
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• Veterinary care is provided if lesions or illness result from restraint ( <i>Guide, p 30</i> ) <b>[must]</b>	X				
• Explanations of purpose and duration of restraint are provided to study personnel ( <i>Guide, p 30</i> )	X				
• Multiple surgical procedures on a single animal are justified and outcomes evaluated ( <i>Guide, p 30</i> )	X				



• Major versus minor surgical procedures are evaluated on a case-by-case basis ( <i>Guide</i> , <a href="#">p 30</a> )	X				
• Multiple survival procedure justifications in non-regulated species conform to regulated species standards ( <i>Guide</i> , <a href="#">p 30</a> )	X				
• Animals on food/fluid restriction are monitored to ensure nutritional needs are met ( <i>Guide</i> , <a href="#">p 31</a> )	X				
• Body weights for food/fluid restricted animals are recorded at least weekly ( <i>Guide</i> , <a href="#">p 31</a> )	X				
• Daily written records are maintained for food/fluid restricted animals ( <i>Guide</i> , <a href="#">p 31</a> )	X				
• Pharmaceutical grade chemicals are used , when available, for animal-related procedures ( <i>Guide</i> , <a href="#">p 31</a> )	X				
• Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC ( <i>Guide</i> , <a href="#">p 31</a> )	X				

## 5. IACUC Membership and Functions

**A\* M S C NA**

• IACUC is comprised of at least 5 members, appointed by CEO (PHS Policy, <a href="#">IV.A.3.</a> )	X				
• Members include a veterinarian, a scientist, a nonscientist, and a nonaffiliated non-lab animal user ( <i>Guide</i> , <a href="#">p 24</a> ) <sup>ii</sup>	X				
• IACUC authority and resources for oversight and evaluation of institution's program are provided ( <i>Guide</i> , <a href="#">p 14</a> )	X				
• IACUC conducts semiannual evaluations of institutional animal care and use program (PHS Policy, <a href="#">IV.B.</a> )	X				
• Conducts semiannual inspections of institutional animal facilities (PHS Policy, <a href="#">IV.B.</a> )	X				
• IACUC organizationally reports to the Institutional Official (PHS Policy, <a href="#">IV.A.1.b.</a> )	X				
• Methods for reporting and investigating animal welfare concerns are in place ( <i>Guide</i> , <a href="#">p 23</a> ) <b>[must]</b>	X				
• Reviews and investigates concerns about animal care and use at institution <sup>iii</sup> (PHS Policy, <a href="#">IV.B.</a> )	X				
• Procedures are in place for review, approval, and suspension of animal activities <sup>iv</sup> (PHS Policy, <a href="#">IV.B.</a> )	X				
• Procedures are in place for review and approval of significant changes to approved activities (PHS Policy, <a href="#">IV.B.</a> )	X				
• Policies are in place for special procedures (e.g., genetically modified animals, restraint, multiple survival surgery, food and fluid regulation, field investigations, agricultural animals) ( <i>Guide</i> , <a href="#">p 27-32</a> )	X				
• Requests for exemptions from major survival surgical procedure restrictions are made to USDA/APHIS <sup>v</sup> ( <i>Guide</i> , <a href="#">p 30</a> ) <b>[must]</b>	X				

## 6. IACUC Training **NEW**

**A M S C NA**

• All IACUC members should receive:					
◦ Formal orientation to institution's program ( <i>Guide</i> , <a href="#">p 17</a> )	X				
◦ Training on legislation, regulations, guidelines, and policies ( <i>Guide</i> , <a href="#">p 17</a> )	X				
◦ Training on how to inspect facilities and labs where animal use or housing occurs ( <i>Guide</i> , <a href="#">p 17</a> )	X				
◦ Training on how to review protocols as well as evaluate the program ( <i>Guide</i> , <a href="#">p 17</a> )	X				
◦ Ongoing training/education ( <i>Guide</i> , <a href="#">p 17</a> )	X				

## 7. IACUC Records and Reporting Requirements<sup>vi</sup>

**A\* M S C NA**

• Semiannual report to the IO (PHS Policy, <a href="#">IV.B.</a> )					
◦ Submitted to IO every 6 months	X				
◦ Compiles program review and facility inspection(s) results (includes all program and facility deficiencies)	X				
◦ Includes minority IACUC views	X				
◦ Describes IACUC-approved departures from the <i>Guide</i> or PHS Policy and the reasons for each departure <sup>vii</sup>	X				
◦ Distinguishes significant from minor deficiencies	X				
◦ Includes a plan and schedule for correction for each deficiency identified <sup>viii</sup>	X				
• Reports to OLAW (PHS Policy, <a href="#">IV.F.</a> )					
◦ Annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views	X				



o Promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or PHS Policy noncompliance ( <a href="#">NOT-OD-05-034</a> )	X				
o Institute must promptly advise OLAW of any suspension of an animal activity by the IACUC ( <a href="#">NOT-OD-05-034</a> )	X				
• Reports to U.S. Department of Agriculture (USDA) or Federal funding agency <sup>ix</sup>					
o Annual report to USDA contains required information including all exceptions/exemptions	X				
o Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards	X				
o Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies	X				
o Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency	X				
• Records (PHS Policy, <a href="#">IV.E.</a> )					
o IACUC meeting minutes and semiannual reports to the IO are maintained for 3 years	X				
o Records of IACUC reviews of animal activities include all required information <sup>x</sup>	X				
o Records of IACUC reviews are maintained for 3 years after the completion of the study	X				

## 8. Veterinary Care (See also next section - Veterinary Care)

	A*	M	S	C	NA
• An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care <sup>xi</sup>	X				
• Veterinary access to all animals is provided ( <i>Guide</i> , <a href="#">p 14</a> ) <b>[must]</b>	X				
• Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use ( <i>Guide</i> , <a href="#">p 14</a> ) <b>[must]</b>	X				
• Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol ( <i>Guide</i> , <a href="#">p 5</a> ) <b>[must]</b>	X				
• Veterinarian provides consultation when interventional control is not possible ( <i>Guide</i> , <a href="#">p 5</a> ) <b>[must]</b>	X				
• If part time /consulting veterinarian, visits meet programmatic needs ( <i>Guide</i> , <a href="#">p 14</a> )	X				
• Regular communication occurs between veterinarian and IACUC ( <i>Guide</i> , <a href="#">p 14</a> )	X				
• Veterinarian(s) have experience and training in species used ( <i>Guide</i> , <a href="#">p 15</a> ) <b>[must]</b>	X				
• Veterinarian(s) have experience in facility administration/management ( <i>Guide</i> , <a href="#">p 15</a> )	X				

## 9. Personnel Qualifications and Training

	A*	M	S	C	NA
• All personnel are adequately educated, trained, and/or qualified in basic principles of laboratory animal science. Personnel included: <b>[must]</b>					
o Veterinary/other professional staff ( <i>Guide</i> , <a href="#">p 15-16</a> )	X				
o IACUC members ( <i>Guide</i> , <a href="#">p 17</a> )	X				
o Animal care personnel ( <i>Guide</i> , <a href="#">p 16</a> )	X				
o Research investigators, instructors, technicians, trainees, and students ( <i>Guide</i> , <a href="#">pp 16-17</a> )	X				
• Continuing education for program and research staff provided to ensure high quality care and reinforce training ( <i>Guide</i> , <a href="#">pp 16-17</a> )	X				
• Training is available prior to starting animal activity ( <i>Guide</i> , <a href="#">p 17</a> )	X				
• Training is documented ( <i>Guide</i> , <a href="#">p 15</a> )	X				
• Training program content includes: ( <i>Guide</i> , <a href="#">p 17</a> )					
o Methods for reporting concerns ( <i>Guide</i> , <a href="#">p 17</a> )	X				
o Humane practices of animal care (e.g., housing, husbandry, handling) <sup>xii</sup>	X				
o Humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia) ( <i>Guide</i> , <a href="#">p 17</a> ) <sup>xiii</sup>	X				
o Research/testing methods that minimize numbers necessary to obtain valid results (PHS Policy, <a href="#">IV.A.1.q.</a> )	X				
o Research/testing methods that minimize animal pain or distress (PHS Policy, <a href="#">IV.A.1.q.</a> )	X				
o Use of hazardous agents, including access to OSHA chemical hazard notices where applicable ( <i>Guide</i> , <a href="#">p 20</a> )	X				



o Animal care and use legislation ( <i>Guide, p 17</i> )	X				
o IACUC function ( <i>Guide, p 17</i> )	X				
o Ethics of animal use and Three R's ( <i>Guide, p 17</i> )	X				

## Occupational Health and Safety of Personnel

**A\* M S C NA**

• Program is in place and is consistent with federal, state, and local regulations ( <i>Guide, p 17</i> ) <b>[must]</b>	X				
• Program covers <i>all</i> personnel who work in laboratory animal facilities ( <i>Guide, p 18</i> )	X				
• Changing, washing, and showering facilities are available as appropriate ( <i>Guide, p 19</i> )	X				
• Hazardous facilities are separated from other areas and identified as limited access ( <i>Guide, p 19</i> )	X				
• Personnel training is provided based on risk (e.g., zoonoses, hazards, personal hygiene, special precautions, animal allergies) ( <i>Guide, p 20</i> )	X				
• Personal hygiene procedures are in place (e.g., work clothing, eating/drinking/smoking policies) ( <i>Guide, p 20</i> )	X				
• Procedures for use, storage, and disposal of hazardous biologic, chemical, and physical agents are in place ( <i>Guide, p 21</i> )	X				
• Personal Protective Equipment for the work area is appropriate and available ( <i>Guide, p 21</i> )	X				
• Program for medical evaluation and preventive medicine for personnel includes:					
o Pre-employment evaluation including health history ( <i>Guide, p 22</i> )	X				
o Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate ( <i>Guide, p 22</i> )	X				
o Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. ( <i>Guide, p 23</i> )	X				
o Promotes early diagnosis of allergies including preexisting conditions ( <i>Guide, p 22</i> )	X				
o Considers confidentiality and other legal factors as required by federal, state and local regulations ( <i>Guide, p 22</i> ) <b>[must]</b>	X				
o If serum samples are collected, the purpose is consistent with federal and state laws ( <i>Guide, p 22</i> ) <b>[must]</b>	X				
• Waste anesthetic gases are scavenged ( <i>Guide, p 21</i> )	X				
• Hearing protection is provided in high noise areas ( <i>Guide, p 22</i> )	X				
• Respiratory protection is available when performing airborne particulate work ( <i>Guide, p 22</i> )	X				
• Special precautions for personnel who work with nonhuman primates, their tissues or body fluids include:					
o Tuberculosis screening provided for all exposed personnel ( <i>Guide, p 23</i> )	X				
o Training and implementation of procedures for bites, scratches, or injuries associated with macaques ( <i>Guide, p 23</i> )	X				
o PPE is provided including gloves, arm protection, face masks, face shields, or goggles ( <i>Guide, p 21</i> )	X				
o Injuries associated with macaques are carefully evaluated and treatment implemented ( <i>Guide, p 23</i> )	X				
• Occupational safety and health of field studies is reviewed by OSH committee or office ( <i>Guide, p 32</i> )	X				

## 11. Personnel Security **NEW**

**A M S C NA**

• Preventive measures in place include pre-employment screening, and physical and IT security ( <i>Guide, p 23</i> )	X				
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## 12. Investigating & Reporting Animal Welfare Concerns **NEW**

**A\* M S C NA**

• Methods for investigating and reporting animal welfare concerns are established ( <i>Guide, p 23</i> ) <b>[must]</b>	X				
• Reported concerns and corrective actions are documented ( <i>Guide, p 24</i> )	X				
• Mechanisms for reporting concerns are posted in facility and at applicable website with instructions ( <i>Guide, p 24</i> )	X				
o Includes multiple contacts ( <i>Guide, p 24</i> )	X				
o Includes anonymity, whistle blower policy, nondiscrimination and reprisal protection ( <i>Guide, p 24</i> )	X				

\* A = acceptable



## Veterinary Care

Date:

### 1. Clinical Care and Management NEW

	A*	M	S	C	NA
• Veterinary program offers high quality of care and ethical standards ( <i>Guide, p 105</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				
• Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia ( <i>Guide, p 106</i> )	X				
• Veterinarian provides oversight to surgery and perioperative care ( <i>Guide, p 106</i> )	X				
• Veterinary care program is appropriate for program requirements ( <i>Guide, pp 113-114</i> )	X				
• Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records ( <i>Guide, p 114</i> )	X				
• Procedures to triage and prioritize incident reports are in place ( <i>Guide, p 114</i> )	X				
• Procedures are in place to address:					
o Problems with experiments to determine course of treatment in consultation with investigator ( <i>Guide, p 114</i> )	X				
o Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes ( <i>Guide, p 114</i> )	X				
o Veterinary review and oversight of medical and animal use records ( <i>Guide, p 115</i> )	X				
• Procedures established for timely reporting of animal injury, illness, or disease ( <i>Guide, p 114</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				
• Procedures established for veterinary assessment, treatment, or euthanasia ( <i>Guide, p 114</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				
• Veterinarian is authorized to treat, relieve pain, and/or euthanize ( <i>Guide, p 114</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				

### 2. Animal Procurement and Transportation/Preventive Medicine

	A*	M	S	C	NA
• Procedures for lawful animal procurement are in place ( <i>Guide, p 106</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				
• Sufficient facilities and expertise are confirmed prior to procurement ( <i>Guide, p 106</i> )	X				
• Procurement is linked to IACUC review and approval ( <i>Guide, p 106</i> )	X				
• Appropriate records are maintained on animal acquisition ( <i>Guide, p 106</i> )	X				
• Animal vendors are evaluated to meet program needs and quality ( <i>Guide, p 106</i> )	X				
• Breeding colonies are based on need and managed to minimize numbers ( <i>Guide, p 107</i> )	X				
• Procedures for compliance with animal transportation regulations, including international requirements, are in place ( <i>Guide, p 107</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				
• Transportation is planned to ensure safety, security and minimize risk ( <i>Guide, p 107</i> )	X				
• Movement of animals is planned to minimize transit time and deliveries are planned to ensure receiving personnel are available ( <i>Guide, pp 107-108</i> )	X				
• Appropriate loading and unloading facilities are available ( <i>Guide, p 109</i> )	X				
• Environment at receiving site is appropriate ( <i>Guide, p 109</i> )	X				
• Policies in place on separation by species, source, and health status ( <i>Guide, pp 109, 111-112</i> )	X				
• Procedures in place for quarantine to include zoonoses prevention ( <i>Guide, p 110</i> )	X				
• Quarantined animals from different shipments are handled separately or physically separated ( <i>Guide, p 110</i> )	X				
• Procedures in place for stabilization/acclimation ( <i>Guide, pp 110-111</i> )	X				
• Policies in place for isolation of sick animals ( <i>Guide, p 112</i> )	X				
• Program is in place for surveillance, diagnosis, treatment and control of disease to include daily observation ( <i>Guide, p 112</i> )	X				
• Diagnostic resources are available for preventive health program ( <i>Guide, p 112</i> )	X				

### 3. Surgery

	A	M	S	C	NA
• Surgical outcomes are assessed and corrective changes instituted ( <i>Guide, p 115</i> )	X				
• Researchers have appropriate training to ensure good technique ( <i>Guide, p 115</i> ) <span style="background-color: blue; color: white;">[must]</span>	X				
• Pre-surgical plans are developed and include veterinary input (e.g., location, supplies, anesthetic and analgesic use, peri-operative care, recordkeeping) ( <i>Guide, p 116</i> )	X				



• Aseptic surgery is conducted in dedicated facilities or spaces, unless exception justified and IACUC approved ( <i>Guide, p 116</i> )	X				
• Surgical procedures including laparoscopic procedures are categorized as major or minor ( <i>Guide, pp 117-118</i> )	X				
• For nonsurvival surgery, the site is clipped, gloves are worn and instruments and area are clean ( <i>Guide, p 118</i> )	X				
• Aseptic technique is followed for survival surgical procedures ( <i>Guide, pp 118-119</i> )	X				
• Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place ( <i>Guide, p 119</i> )	X				
• Procedures for monitoring surgical anesthesia and analgesia are in place ( <i>Guide, p 119</i> )	X				
• Post-operative monitoring and care are provided by trained personnel and documented (e.g., thermoregulation, physiologic function, analgesia, infection, removal of skin closures) ( <i>Guide, pp 119-120</i> )	X				

#### 4. Pain, Distress, Anesthesia and Analgesia

**A\* M S C NA**

• Guidelines for assessment and categorization of pain, distress and animal wellbeing are provided during training ( <i>Guide, p 121</i> )	X				
• Selection of analgesics and anesthetics is based on professional veterinary judgment ( <i>Guide, p 121</i> )	X				
• Painful procedures are monitored to ensure appropriate analgesic management ( <i>Guide, p 122</i> )	X				
• Nonpharmacologic control of pain is considered as an element of postprocedural care ( <i>Guide, p 122</i> )	X				
• Procedures are in place to assure antinociception before surgery begins ( <i>Guide, p 122</i> ) [must]	X				
• Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated ( <i>Guide, p 122</i> )	X				
• Special precautions for the use of paralytics are in place to ensure anesthesia <sup>xiv</sup> ( <i>Guide, p 123</i> )	X				

#### 5. Euthanasia

**A\* M S C NA**

• Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC ( <i>Guide, p 123</i> )	X				
• Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species ( <i>Guide, pp 123-124</i> )	X				
• Training is provided on appropriate methods for each species and considers psychological stress to personnel ( <i>Guide, p 124</i> )	X				
• Procedures and training are in place to ensure death is confirmed ( <i>Guide, p 124</i> ) [must]	X				

#### 6. Drug Storage and Control **NEW**

**A M S C NA**

• Program complies with federal regulations for human and veterinary drugs ( <i>Guide, p 115</i> ) [must]	X				
• Drug records and storage procedures are reviewed during facility inspections ( <i>Guide, p 115</i> )	X				
• Procedures are in place to ensure analgesics and anesthetics are used within expiration date ( <i>Guide, p 122</i> ) [must]	X				
• Anesthetics and analgesics are acquired, stored, and their use and disposal are recorded legally and safely ( <i>Guide, p 122</i> )	X				

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**NA** = not applicable

#### NOTES:



## II. Semiannual Facility Inspection Checklist

### Terrestrial Animal Housing and Support Areas

Date: 11/16/20

Location: BRF

A\* M S C NA

<b>Location:</b>					
o animal areas separate from personnel areas (Guide, p 134)	✓				
o separation of species (Guide, p 111)	✓				
o separation by disease status (Guide, p 111)	✓				
o security and access control (Guide, p 151)	✓				
<b>Construction:</b>					
o corridors (Guide, p 136)	✓				
o animal room doors (Guide, p 137)	✓				
o floors (Guide, p 137)	✓				
o drainage (Guide, p 138)	✓				
o walls and ceilings (Guide, p 138)	✓				
o heating ventilation and air conditioning (Guide, p 139)	✓				
o power and lighting (Guide, p 141)	✓				
o noise control (Guide, p 142)	✓				
o vibration control (Guide, p 142)	✓				
o environmental monitoring (Guide, p 143)	✓				
<b>Room/Cage:</b>					
o temperature and humidity (Guide, p 43)	✓				
o ventilation and air quality (Guide, p 45)	✓				
o illumination (Guide, p 47)	✓				
o noise and vibration (Guide, p 49)	✓				
<b>Primary Enclosure:</b>					
o space meets physiologic, behavioral <sup>xv</sup> , and social <sup>xvi</sup> needs (Guide, pp 51, 55-63)	✓				
o secure environment provided (Guide, p 51)	✓				
o durable, nontoxic materials in good repair and no risk of injury (Guide, p 51)	✓				
o flooring is safe and appropriate for species (Guide, p 51)	✓				
o adequate bedding and structures for resting, sleeping, breeding (Guide, p 52)	✓				
o objective assessments of housing and management are made (Guide, p 52)	✓				
o procedures for routine husbandry are documented (Guide, p 52)	✓				
o socially housed animals can escape or hide to avoid aggression (Guide, p 55)	✓				
o cage height provides adequate clearance (Guide, p 56)	✓				
o animals express natural postures, can turn around, access food and water, and rest away from urine and feces (Guide, p 56) [must]	✓				
o rationale <sup>xvii</sup> for Guide/USDA space exceptions approved by IACUC and based on performance indices (Guide, p 56)	✓				
o dogs and cats allowed to exercise and provided human interaction (Guide, p 58)					✓
o nonhuman primates are socially housed except for scientific, veterinary or behavior reasons (Guide, pp 58-59)	✓				
o single housing of nonhuman primates is for shortest duration possible (Guide, p 60)	✓				
o opportunities for release into larger enclosures is considered for single caged nonhuman primates (Guide, p 60)	✓				
<b>Environmental Enrichment, Behavioral and Social Management:</b>					
o structures and resources promote species typical behavior (Guide, pp 52-54)	✓				
o novelty of enrichment is considered (Guide, p 53)	✓				
o species specific plans for housing including enrichment, behavior and activity are developed and reviewed regularly by IACUC, researchers and veterinarian (Guide, pp 53, 58, 60, 63)	✓				
o animal care personnel receive training to identify abnormal animal behaviors (Guide, p 53)	✓				



○ stability of pairs or groups is monitored for incompatibility ( <i>Guide, p 64</i> )	✓				
○ single housing is justified for social species ( <i>Guide, p 64</i> )	✓				
○ single housing is limited to the minimum period necessary ( <i>Guide, p 64</i> )	✓				
○ additional enrichment for single housed animals is provided ( <i>Guide, p 64</i> )	✓				
○ single housing is reviewed regularly by IACUC and veterinarian ( <i>Guide, p 64</i> )	✓				
○ habituation to routine procedures is part of enrichment program ( <i>Guide, p 64</i> )	✓				
• <b>Naturalistic Environments:</b>					
○ animals added /removed with consideration of effect on group ( <i>Guide, p 55</i> )	✓				
○ adequate food, fresh water, and shelter ensured ( <i>Guide, p 55</i> )	✓				
• <b>Food:</b>					
○ feeding schedule and procedures including caloric intake management ( <i>Guide, pp 65-67</i> )	✓				
○ contamination prevention ( <i>Guide, p 65</i> )	✓				
○ vendor quality control ( <i>Guide, p 66</i> )	✓				
○ storage in sealed containers ( <i>Guide, p 66</i> )	✓				
○ expiration date labeling ( <i>Guide, p 66</i> )	✓				
○ vermin control ( <i>Guide, p 66</i> )	✓				
○ rotation of stocks ( <i>Guide, p 66</i> )	✓				
• <b>Water:</b>					
○ ad libitum unless justified ( <i>Guide, pp 67-68</i> )	✓				
○ QC procedures ( <i>Guide, pp 67-68</i> )	✓				
• <b>Bedding and Nesting Materials:</b>					
○ species appropriate ( <i>Guide, pp 68-69</i> )	✓				
○ keeps animals dry ( <i>Guide, pp 68-69</i> )	✓				
○ QC procedures ( <i>Guide, pp 68-69</i> )	✓				
○ minimizes scientific variables ( <i>Guide, pp 68-69</i> )	✓				
• <b>Sanitation:</b>					
○ frequency of bedding/substrate change ( <i>Guide, p 70</i> )	✓				
○ cleaning and disinfection of microenvironment ( <i>Guide, pp 70-71</i> )	✓				
○ cleaning and disinfection of macroenvironment ( <i>Guide, p 72</i> )	✓				
○ assessing effectiveness ( <i>Guide, p 73</i> )	✓				
• <b>Waste Disposal:</b>					
○ procedures for collection ( <i>Guide, pp 73-74</i> )	✓				
○ procedures for storage and disposal ( <i>Guide, pp 73-74</i> )	✓				
○ hazardous wastes are rendered safe before removal from facility ( <i>Guide, pp 73-74</i> ) <b>[must]</b>	✓				
○ animal carcasses ( <i>Guide, pp 73-74</i> )	✓				
• <b>Pest Control:</b>					
○ regularly scheduled ( <i>Guide, p 74</i> )	✓				
○ documented program including control of rodent pests and insecticide use ( <i>Guide, p 74</i> )	✓				
• <b>Emergency, Weekend, and Holiday Animal Care:</b>					
○ care provided by qualified personnel every day ( <i>Guide, p 74</i> )	✓				
○ provision for accessible contact information ( <i>Guide, p 74</i> )	✓				
○ monitoring of backup systems ( <i>Guide, p 143</i> )	✓				
○ veterinary care available after hours, weekends, and holidays ( <i>Guide, pp 74, 114</i> ) <b>[must]</b>	✓				
○ a disaster plan that takes into account both personnel and animals ( <i>Guide, p 75</i> )	✓				
• <b>Identification:</b>					
○ cage/rack cards contain required information ( <i>Guide, p 75</i> )	✓				
○ genotype information included and standardized nomenclature used when applicable ( <i>Guide, p 75</i> )	✓				
• <b>Recordkeeping:</b>					
○ clinical records accessible and contain appropriate information ( <i>Guide, pp 75-76</i> )	✓				
○ records are provided when animals are transferred between institutions ( <i>Guide, p 75</i> )	✓				
• <b>Breeding Genetics and Nomenclature:</b>					
○ appropriate genetic records, management and monitoring procedures ( <i>Guide, p 76</i> )	✓				

o phenotypes that affect wellbeing are reported to IACUC and effectively managed (Guide, <a href="#">p 77</a> )					
<b>• Storage:</b>					
o adequate space for equipment, supplies, food, bedding and refuse (Guide, <a href="#">p 141</a> )	✓				
o bedding in vermin-free area and protected from contamination (Guide, <a href="#">p 141</a> )	✓				
o food in vermin-free, temperature and humidity controlled area and protected from contamination (Guide, <a href="#">p 141</a> )	✓				
o refuse storage is separate (Guide, <a href="#">p 141</a> )	✓				
o carcass and animal tissue storage is separate, refrigerated below 7°C and cleanable (Guide, <a href="#">p 141</a> )	✓				
<b>• Personnel:</b>					
o adequate space for locker rooms, administration and training (Guide, <a href="#">p 135</a> )	✓				

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**NA** = not applicable

#### NOTES:



## Cagewash

ate:  
Location:

	A*	M	S	C	NA
<b>• Construction and Operation:</b>					
o dedicated central area for sanitizing cages and equipment is provided ( <i>Guide, p 143</i> )	✓				
o cage-washing equipment meets need ( <i>Guide, p 143</i> )	✓				
o doors, windows, floors, drainage, walls, ceilings ( <i>Guide, pp 136-138</i> )	✓				
o convenient to animal areas/waste disposal ( <i>Guide, p 143</i> )	✓				
o ease of access (including door size) facilitates use ( <i>Guide, p 143</i> )	✓				
o sufficient space for staging and maneuvering ( <i>Guide, p 143</i> )	✓				
o safety precautions/clothing/equipment used for waste disposal/prewash/acid wash ( <i>Guide, p 143</i> )	✓				
o traffic flow clean to dirty with no contamination of clean equipment by dirty equipment and appropriate air pressurization ( <i>Guide, p 143</i> )	✓				
o insulation and/or sound attenuation present as needed ( <i>Guide, p 143</i> )	✓				
o utilities are appropriate ( <i>Guide, p 143</i> )	✓				
o ventilation meets heat and humidity load ( <i>Guide, p 143</i> )	✓				
o safety features (e.g., SOPs, warning signs, eyewash stations) are in use ( <i>Guide, p 143</i> )	✓				
o functioning safety devices to prevent entrapment in washer/sterilizers ( <i>Guide, p 143</i> )	✓				
o cage wash temperatures are monitored and records are available ( <i>Guide, p 73</i> )	✓				
o appropriate clean cage storage ( <i>Guide, p 141</i> )	✓				

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12 Obtained by Rise for 14  
 Uploaded to Animal Research Laboratory Overview (ARLO) on 04/27/2021



**Special Facilities: Procedure Areas, Non-survival Surgeries, Laboratories, Rodent Surgeries, Imaging, Whole Body Irradiation, Hazardous Agent Containment, Behavioral Studies**

Date:

Location:

	A*	M	S	C	NA
<b>• General Considerations:</b>					
o labs used to house animals only when scientifically required and limited to minimum period necessary ( <i>Guide, p 134</i> )	✓				
o drug storage, control, and expiration dates ( <i>Guide, pp 115, 122</i> )	✓				
o sharps disposal ( <i>Guide, p 74</i> )	✓				
o anesthetic monitoring ( <i>Guide, p 120</i> )	✓				
o scavenging of anesthetic gases ( <i>Guide, p 21</i> )	✓				
o safety features (e.g., SOPs, safety signs, eyewash stations, secure gas cylinders) are in place ( <i>Guide, p 19</i> )	✓				
o carcass disposal ( <i>Guide, pp 73-74</i> )	✓				
<b>• Additional Concerns for Survival Surgery:</b> (rodent and minor procedures only)					
o rodent survival surgery clean and uncluttered, not used for anything else during surgery ( <i>Guide, p 144</i> )	✓				
o records of peri-operative care ( <i>Guide, p 120</i> )	✓				
o aseptic procedures ( <i>Guide, pp 118-119</i> )	✓				
o autoclave monitoring procedures ( <i>Guide, pp 119, 145</i> )	✓				
o storage of autoclaved materials ( <i>Guide, p 145</i> )	✓				
<b>• Hazardous Agent Containment:</b> NEW					
o facility adheres to APHIS, USDA and CDC Select Agent Regulations and other federal, state and local regulations including security measures ( <i>Guide, p 148</i> ) [must]	✓				
<b>• Behavioral Studies:</b> NEW					
o facility minimizes airborne transmission of noise and ground-borne transmission of vibration ( <i>Guide, p 149</i> )	✓				
o floor coverings reduce sound transmission ( <i>Guide, p 149</i> )	✓				
o testing equipment allows for surface disinfection ( <i>Guide, p 150</i> )	✓				
o components that cannot be cleaned are not in ready contact with animals and kept covered when not in use ( <i>Guide, p 150</i> )	✓				
o housing areas are contiguous with testing areas when appropriate ( <i>Guide, p 150</i> )	✓				

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