

Memorandum to: Tamara Deuser, MBA, PMP

From: Institutional Animal Care and Use Committee

Subject: Semiannual Report of the Program Review and Facility Inspection

Date: May 23, 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).

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.](#)):

There were no changes to the program.

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:

See attached IACUC Approved Deviations Report.

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

Animal Care and Use Program Review Date(s): April 25, 2019

Select A or B:

☒ A. There were no deficiencies in the program during this reporting period.

☐ B. The following deficiencies have been identified:

III. Deficiencies in the Institution's Animal Facility

Animal Facility Inspection Date(s): 3/18/19, 3/19/19, 3/20/19, 3/25/19, 3/26/19, 5/14/2019

Select A or B:

☐ A. There were no deficiencies in the animal facility during this reporting period.

☒ B. The following deficiencies have been identified:

See attached Inspection Findings Report.

IV. Minority Views

Select A or B:

☒ A. No minority views were submitted or expressed.

☐ B. The following minority views were expressed:

V. Status of AAALAC Accreditation

Fully accredited since November 16, 1990. Last accredited on July 31, 2018.

VI. Signatures

Names of IACUC Members	Signatures
Karen Kibler	
Dale DeNardo	

IACUC Inspection Findings
March/April 2019

Inspection Date	Bldg	Room	PI(s)	Finding(s)	Date Notice Sent	Deadline for Correction	Date Returned with Signature	Response	Correction Completion Date
3/18/19	█	█	█	(1) Expired gloves, autoclave indicators, acrylic powders, Krazy glue; (2) Guillotine log appears incomplete – last date recorded in February; (3) Guillotine needs to be sharpened.	(1) N/A; (2) 4/12/19; (3) 4/12/19	(1) N/A; (2) 4/26/19; (3) 4/26/19	(1) N/A; (2) 5/8/19; (3) 5/8/19	(1) Fixed on site - disposed; (2) Guillotine usage log has been updated and kept current since the inspection; (2) Guillotine was sharpened 4/12/19.	(1) 3/18/19; (2) 5/8/19; (3) 4/12/19
3/18/19	█	█	█	Unlabeled syringe filled with a solution. This needs to be labeled.	N/A	N/A	N/A	Fixed on site - disposed; confirmed to be diluted cocaine	3/18/19
3/18/19	█	█	█	Expired betadine swabs.	N/A	N/A	N/A	Fixed on site - disposed	3/18/19
3/18/19	█	█	█	No log for KXA cocktails.	4/12/2019	4/26/2019	5/8/2019	A log has been created. It is being used to track the creation and use of KXA cocktails.	5/8/19
3/18/19	█	█	█	Expired orthodontic liquid.	N/A	N/A	N/A	Fixed on site - moved to "expired" storage for use on nonsurvival procedures and/or not used on animals.	3/18/19
3/18/19	█	█	█	Starting volume of Euthasol in log unclear.	N/A	N/A	N/A	Fixed on site - clarified log.	3/18/19
3/18/19	█	█	█	Unmarked 50ml conical tube.	N/A	N/A	N/A	Fixed on site - labeled "ground pellets".	3/18/19
3/18/19	█	█	█	Expired KwikStop.	4/12/19	4/26/19	4/23/19	The expired KwikStop was disposed of.	4/23/19

IACUC Inspection Findings
March/April 2019

Inspection Date	Bldg	Room	PI(s)	Finding(s)	Date Notice Sent	Deadline for Correction	Date Returned with Signature	Response	Correction Completion Date
3/18/19				(1) Rusted sterilized surgical instruments; (2) Expired microvette tubes (200 Z-Gel).	4/12/19	4/26/19	4/23/19	(1) The expired microvette tubes were disposed of; (2) The rusted surgical instruments were removed and will be replaced with non-rusted instruments.	4/23/19
3/18/19				Antibiotic-treated water log (on door) needs to be updated to show week of 3/18.	4/12/19	4/26/19	4/12/19	The log will be removed. That water log is no longer relevant, as the study is completed.	4/12/19
3/19/19				Cat treats are expired.	4/12/19	4/26/19	4/12/19	The treats were disposed of upon receiving the notice. The lab no longer has cats, and the room hasn't been in use. The lab will make sure to remove food items from unused rooms from now on to ensure expired items are not overlooked.	4/12/19
3/19/19				(1) Doxy water in fridge is expired; (2) Trypan Blue 0.4% solution is expired.	4/12/19	4/26/19	5/8/19	The expired reagents were discarded. New bottle of Trypan blue was labeled "not for survival use".	5/8/19
3/19/19				Need to clean bedding from imager.	4/12/19	4/26/19	5/10/19	The students cleaned the imager and they were reminded to clean the imager after each used.	5/10/19

IACUC Inspection Findings
March/April 2019

Inspection Date	Bldg	Room	PI(s)	Finding(s)	Date Notice Sent	Deadline for Correction	Date Returned with Signature	Response	Correction Completion Date
3/25/19	█	█	█	Expired Virex.	N/A	N/A	N/A	Fixed on site – disposed.	3/25/19
3/25/19	█	█	█	Student working in the room was not following proper PPE (only wearing lab coat; guidance says gloves, face mask and hair bonnet also needed).	4/12/2019	4/26/2019	4/12/19	Lab has been informed of the importance of following PPE requirements. Gloves and dedicated lab coat are used in the room. The lab will begin the practice of regularly using the facemasks available outside the room. Individuals with long hair were asked to wear bonnets or put hair up in a tight bun before entering the █.	4/12/19
3/25/19	█	█	█	Bag in biohazard bin is not autoclavable.	4/12/2019	4/26/2019	4/26/2019	A meeting with EH&S and DACT was held. ABSL1 waste is discarded through EH&S. Bags containing this waste do not need to be biohazard bags or autoclavable as long as the bin is marked as biohazardous waste. DACT has been following this, and will continue to do so.	4/22/19

IACUC Inspection Findings
March/April 2019

Inspection Date	Bldg	Room	PI(s)	Finding(s)	Date Notice Sent	Deadline for Correction	Date Returned with Signature	Response	Correction Completion Date
3/25/19	█	█	█	Bag in biohazard bin is not autoclavable.	4/12/2019	4/26/2019	4/26/2019	A meeting with EH&S and DACT was held. ABSL1 waste is discarded through EH&S. Bags containing this waste do not need to be biohazard bags or autoclavable as long as the bin is marked as biohazardous waste. DACT has been following this, and will continue to do so.	4/22/19
3/25/19	█	█	█	"Sugar water" cup has no expiration/mix date.	4/12/2019	4/26/2019	4/26/2019	The study with sugar water has ended. Shortly after the inspection, the mix date was added.	4/26/19

IACUC Inspection Findings
March/April 2019

Inspection Date	Bldg	Room	PI(s)	Finding(s)	Date Notice Sent	Deadline for Correction	Date Returned with Signature	Response	Correction Completion Date
3/25/19	█	█	█	Unlabeled syringes.	4/12/2019	4/26/2019	4/26/2019	Syringes are used for gavaging and have blunt feeding tubes, not needles with them. They are never stored with any contents. One is labeled with a G for glucose and one is labeled with a W for water. The labels fade with use and are reapplied as necessary. The labels must have faded at the time of the inspection. The lab has been informed to pay closer attention to the labels and relabel them more frequently.	4/26/19
3/25/19	█	█	█	Bag in biohazard bin is not autoclavable.	4/12/2019	4/26/2019	4/26/2019	A meeting with EH&S and DACT was held. ABSL1 waste is discarded through EH&S. Bags containing this waste do not need to be biohazard bags or autoclavable as long as the bin is marked as biohazardous waste. DACT has been following this, and will continue to do so.	4/22/19
3/26/19	█	█	█	(1) Igloo Cooler needs to be emptied; (2) Tubes with water not clearly labeled.	4/12/2019	4/26/2019	5/15/2019	The room was cleaned and tubes were relabeled.	5/8/19

IACUC Inspection Findings
March/April 2019

Inspection Date	Bldg	Room	PI(s)	Finding(s)	Date Notice Sent	Deadline for Correction	Date Returned with Signature	Response	Correction Completion Date
3/26/19	█	█	█	Freezer needs to be emptied of carcasses.	4/12/2019	4/26/2019	5/15/2019	The freezer was emptied.	5/8/19
3/26/19	█	█	█	Guillotine needs sharpening.	4/12/19	4/26/19	4/22/19	An appointment with █ has been scheduled for May 3.	5/3/19
3/26/19	█	█	█	Full sharps container.	4/12/19	4/26/19	4/12/19	The student who led to tour informed the PI on the day of. The sharps containers were replaced on 3/29. They are scheduled for pick up 4/12.	4/12/19
3/26/19	█	█	█	Full sharps container.	4/12/19	4/26/19	4/12/19	The student who led to tour informed the PI on the day of. The sharps containers were replaced on 3/29. They are scheduled for pick up 4/12.	4/12/19
3/26/19	█	█	█	Update emergency contact info on all doors to remove █.	4/12/19	4/26/19	4/26/19	█ graduated this semester. Signs have been updated to remove █'s name with that of another, current graduate student.	4/26/19

IACUC Approved Deviations Report
November 14, 2018 – May 17, 2019

Protocol Number	Deviation Date	Deviation Type	Investigator	Species	Comments
19-1696R	January 24, 2019	Food/Water Restriction	██████	Mice	What Restricted: Food & water Parameters: Animals will not have access to food and water while in mesh restraint (6 hours). Control animals have similar restrictions to be similar to experimental animals.
19-1716R	April 25, 2019	Food/Water Restriction	██████	Tortoise	What Restricted: Food & water Parameters: To examine water balance, food and water are withheld until target osmolality is reached. For dehydration tolerance studies, food and water are withheld until early clinical signs of dehydration (lethargy, reduced righting reflex) are detected.
19-1695R	February, 28 2019	Food/Water Restriction	██████	Mice	What Restricted: Food Parameters: Animals will undergo overnight fasting (up to 18 hours) to enhance absorption of orally administered material.
19-1700R	February, 28 2019	Food/Water Restriction	██████	Rat	What Restricted: Food Parameters: Food restricted to make animals more motivated for behavioral tasks. Target weight is 90% of established growth rates from age-matched rats receiving ad libitum feeding, and they will not be allowed to fall below 85% of their weight.
17-1549R	January 24, 2019	Food/Water Restriction	██████	Mice	What Restricted: Food Parameters: Animals are fasted overnight (12-18 hours) to prevent depletion of pancreatic enzymes.
19-1688R	January 11, 2019	Husbandry Deviation from the Guide	██████	Mice	Mice may be singly housed if there is aggression among cage-mates,

IACUC Approved Deviations Report
November 14, 2018 – May 17, 2019

Protocol Number	Deviation Date	Deviation Type	Investigator	Species	Comments
					death of a cage-mate, or need to be euthanize a cage-mate as a result of it reaching an end point criterion.
19-1711R	March 28, 2019	Husbandry Deviation from the Guide	██████	Mice	Mice may be singly housed if there is aggression among cage-mates, death of a cage-mate, or need to euthanize a cage-mate as a result of it reaching an end point criterion.
19-1712R	March 28, 2019	Husbandry Deviation from the Guide	██████	Mice	Food may be placed on cage floor if mice have difficulty reaching it in the hopper.
19-1692R	January 25, 2019	Husbandry Deviation from the Guide	██████████	Mice	Single housing if unable to complete planned procedures within a day, when recovering from surgical procedures, or if necessary due to aggression/fighting.
19-1699R	February, 28 2019	Husbandry Deviation from the Guide	██████	Amphibians	For transmission studies, two species will be co-housed adjacent to each other to avoid direct contact yet enable exposure to the pathogens via water transfer.
19-1703R	February, 28 2019	Husbandry Deviation from the Guide	██████	Fish	In order to film feeding events, fish that may or may not be slightly social (schooling) in nature will be single housed. This is tolerated by the fish providing "hidey holes" in the aquaria. The fish are also housed in the lab.
19-1687R	December 12, 2018	Husbandry Deviation from the Guide	██████████	Rats	Animals will be housed in pairs. However, if there is any indication of fighting and/or injury to the surgical site the rodents will be housed singly and enrichment may

IACUC Approved Deviations Report
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Protocol Number	Deviation Date	Deviation Type	Investigator	Species	Comments
					be limited to a chew toy instead of tube. Any changes will be made in consultation with DACT vet staff.
17-1536R	April 1, 2019	Husbandry Deviation from the Guide	██████	Mice	Offspring from ZBP strain may be weaned as late as 28 days.
19-1700R	February, 28 2019	Husbandry Deviation from the Guide	██████	Rat	Animals will be singly housed if their weights fall below 90% for more than 48 hours while doubly housed.
18-1657R	April 25, 2019	Husbandry Deviation from the Guide	██████	Rats	Breeding rats may be housed singly (females, once pregnant and males between cohorts).
19-1706R	February, 28 2019	Husbandry Deviation from the Guide	██████	Mice	Single housing if necessary due to incompatibility between co-housed mice.
19-1698R	January 24, 2019	Husbandry Deviation from the Guide	██████████	Rats, Mice	Single-house all animals post-surgery.
19-1704R	March 28, 2019	Husbandry Deviation from the Guide	██████	Rat	Single housing after surgery to promote healing.
19-1705R	February, 28 2019	Husbandry Deviation from the Guide	██████	Mice	Single housing may be necessary for breeder males or situations such as fighting/incompatibility between cage-mates.
19-1718R	April 25, 2019	Multiple Major Surgeries	██████████	Lizards	Surgeries for transmitter and logger implantation and explanation.
19-1704R	March 28, 2019	Multiple Major Surgeries	██████	Rat	Myocardial infraction surgery and intraventricular injection.
19-1696R	January 24, 2019	Prolonged Restraint	██████	Mice	Animals held in mesh restrainers 6 hours per day for 21 days.
19-1707R	February, 28 2019	Prolonged Restraint	██████	House Finch	Animals held in bird bags for 30 minutes to create a controlled stress condition to assess stress responsiveness.

Arizona State University
IACUC
Semiannual Program Review Checklist – adopted from OLAW
Date Review Performed: April 25, 2019

Institutional Policies and Responsibilities

1. Animal Care and Use Program	A	M	S	C	NA
a. Responsibility for animal well-being is assumed by all members of the program (Guide, p 1)	X				
b. IO has authority to allocate needed resources (Guide, p 13)	X				
c. Resources necessary to manage program of veterinary care are provided (Guide, p 14)	X				
d. Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the Guide (Guide, pp 11, 15)	X				
e. Program needs are regularly communicated to IO by AV and/or IACUC (Guide, p 13)	X				
f. Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site (Guide, p 14)	X				
g. Inter-institutional collaborations are described in formal written agreements (Guide, p 15)	X				
h. Written agreements address responsibilities, animal ownership, and IACUC oversight (Guide, p 15)	X				
2. Disaster Planning and Emergency Preparedness	A	M	S	C	NA
a. Disaster plans for each facility to include satellite locations are in place (Guide, p 35, p 75)	X				
b. Plans include provisions for euthanasia (Guide, p 35)	X				
c. Plans include triage plans to meet institutional and investigators' needs (Guide, p 35)	X				
d. Plans define actions to prevent animal injury or death due to HVAC or other failures (Guide, p 35)	X				
e. Plans describe preservation of critical or irreplaceable animals (Guide, p 35)	X				
f. Plans include essential personnel and their training (Guide, p 35)	X				
g. Animal facility plans are approved by the institution and incorporated into overall response plan (Guide, p 35)	X				
h. Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place (Guide, p 35)	X				
3. IACUC	A	M	S	C	NA
a. Meets as necessary to fulfill responsibilities (Guide, p 25)	X				
b. IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions (Guide, p 26)	X				
c. Continuing IACUC oversight after initial protocol approval is in place (Guide, p 33)	X				
d. IACUC evaluates the effectiveness of training programs (Guide, p 15)	X				

4. IACUC Protocol Review – Special Considerations		A	M	S	C	NA
a.	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 (Guide, p 27)	X				
b.	For pilot studies, a system to communicate with the IACUC is in place (Guide, p 28)	X				
c.	For genetically modified animals, enhanced monitoring and reporting is in place (Guide, p 28)	X				
d.	Restraint devices are justified in the animal use protocols (Guide, p 29)	X				
e.	Alternatives to physical restraint are considered (Guide, p 29)	X				
f.	Period of restraint is the minimum to meet scientific objectives (Guide, p 29)	X				
g.	Training of animals to adapt to restraint is provided (Guide, p 29)	X				
h.	Animals that fail to adapt are removed from study (Guide, p 29)	X				
i.	Appropriate observation intervals of restrained animals are provided (Guide, p 29)	X				
j.	Veterinary care is provided if lesions or illness result from restraint (Guide, p 30)	X				
k.	Explanations of purpose and duration of restraint are provided to study personnel (Guide, p 30)	X				
l.	Multiple surgical procedures on a single animal are justified and outcomes evaluated (Guide, p 30)	X				
m.	Major versus minor surgical procedures are evaluated on a case-by-case basis (Guide, p 30)	X				
n.	Multiple survival procedure justifications in non-regulated species conform to regulated species standards (Guide, p 30)	X				
o.	Animals on food/fluid restriction are monitored to ensure nutritional needs are met (Guide, p 31)	X				
p.	Body weights for food/fluid restricted animals are recorded at least weekly (Guide, p 31)	X				
q.	Daily written records are maintained for food/fluid restricted animals (Guide, p 31)	X				
r.	Pharmaceutical grade chemicals are used, when available, for animal-related procedures (Guide, p 31)	X				
a.	Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC (Guide, p 31)	X				
b.	Investigators conducting field studies know zoonotic diseases, safety issues, laws and regulations applicable in study area (Guide, p 32)	X				
c.	Disposition plans are considered for species removed from the wild (Guide, p 32)	X				
d.	Toe-clipping only used when no alternative, performed aseptically and with pain relief (Guide, p 75)	X				
5. IACUC Membership and Functions		A	M	S	C	NA
a.	IACUC is comprised of at least 5 members, appointed by CEO (PHS Policy, IV.A.3.)	X				
b.	Members include a veterinarian, a scientist, a nonscientist, and a nonaffiliated non-lab animal user (Guide, p 24)	X				
c.	IACUC authority and resources for oversight and evaluation of institution's program are provided (Guide, p 14)	X				

A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety); C = change in program (PHS Policy IV.A.1.a.-i.)(Include in semiannual report to IO and in annual report to OLAW); NA = not applicable

IACUC Membership and Functions (continued)	A	M	S	C	NA
d. IACUC conducts semiannual evaluations of institutional animal care and use program (PHS Policy, IV.B.)	X				
e. Conducts semiannual inspections of institutional animal facilities (PHS Policy, IV.B.)	X				
f. IACUC organizationally reports to the Institutional Official (PHS Policy, IV.A.1.b.)	X				
g. Methods for reporting and investigating animal welfare concerns are in place (Guide, p 23)	X				
h. Reviews and investigates concerns about animal care and use at institution (PHS Policy, V.B.)	X				
i. Procedures are in place for review, approval, and suspension of animal activities (PHS Policy, IV.B.)	X				
j. Procedures are in place for review and approval of significant changes to approved activities (PHS Policy, IV.B.)	X				
k. Policies are in place for special procedures (e.g., genetically modified animals, restraint, multiple survival surgery, food and fluid regulation, field investigations, agricultural animals) (Guide, p 27-32)	X				
l. Requests for exemptions from major survival surgical procedure restrictions are made to USDA/APHIS30 (Guide, p 17)	X				
6. IACUC Training	A	M	S	C	NA
All IACUC members should receive:					
a. Formal orientation to institution's program (Guide, p 17)	X				
b. Training on legislation, regulations, guidelines, and policies (Guide, p 17)	X				
c. Training on how to inspect facilities and labs where animal use or housing occurs (Guide, p 17)	X				
d. Training on how to review protocols as well as evaluate the program (Guide, p 17)	X				
e. Ongoing training/education (Guide, p 17)	X				
7. IACUC Records and Reporting	A	M	S	C	NA
Semiannual Report to the IO (PHS Policy, IV.B.)					
a. Submitted to IO every 6 months	X				
b. Compiles program review and facility inspection(s) results (includes all program and facility deficiencies)	X				
c. Includes minority IACUC views	X				
d. Describes IACUC-approved departures from the Guide or PHS Policy and the reasons for each departure	X				
e. Distinguishes significant from minor deficiencies	X				
f. Includes a plan and schedule for correction for each deficiency identified	X				
Reports to OLAW (PHS Policy, IV.F.)					
g. Annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views	X				

IACUC Records and Reporting (continued)	A	M	S	C	NA
h. Promptly advises OLAW of serious/ongoing Guide deviations or PHS Policy noncompliance (NOT-OD-05-034)	X				
i. Institute must promptly advise OLAW of any suspension of an animal activity by the IACUC (NOT-OD-05-034)	X				
Reports to U.S. Department of Agriculture (USDA) or Federal funding agency					
j. Annual report to USDA contains required information including all exceptions/exemptions	X				
k. Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards	X				
l. Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies	X				
m. Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency	X				
Records (PHS Policy, IV.E.)					
n. 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	X				
p. 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
a. An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care	X				
b. Veterinary access to all animals is provided (Guide, p 14)	X				
c. Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use (Guide, p 14)	X				
d. Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol (Guide, p 5)	X				
e. Veterinarian provides consultation when interventional control is not possible (Guide, p 5)	X				
f. If part time /consulting veterinarian, visits meet programmatic needs (Guide, p 14)	X				
g. Regular communication occurs between veterinarian and IACUC (Guide, p 14)	X				
h. Veterinarian(s) have experience and training in species used (Guide, p 15)	X				
i. Veterinarian(s) have experience in facility administration/management (Guide, p 15)	X				
9. Personnel Qualifications and Training	A	M	S	C	NA
a. All personnel are adequately educated, trained, and/or qualified in basic principles of laboratory animal science. Personnel included:	X				
1. Veterinary/other professional staff (Guide, p 15-16)	X				
2. IACUC members (Guide, p 17)	X				
3. Animal care personnel (Guide, p 16)	X				

Personnel Qualifications and Training (continued)	A	M	S	C	NA
4. Research investigators, instructors, technicians, trainees, and students (Guide, pp 16-17)	X				
b. Continuing education for program and research staff provided to ensure high quality care and reinforce training (Guide, pp 16-17)	X				
c. Training is available prior to starting animal activity (Guide, p 17)	X				
d. Training is documented (Guide, p 15)	X				
e. Training program content includes: (Guide, p 17)					
1. Methods for reporting concerns (Guide, p 17)	X				
2. Humane practices of animal care (e.g., housing, husbandry, handling) ^{xii}	X				
3. Humane practices of animal use (e.g., research procedures, use of anesthesia, Semiannual Checklist v3/8/2012 5 pre- and post-operative care, aseptic surgical techniques and euthanasia (Guide, p 17) ^{xiii}	X				
4. Research/testing methods that minimize numbers necessary to obtain valid results (PHS Policy, IV.A.1.g.)	X				
5. Research/testing methods that minimize animal pain or distress (PHS Policy, IV.A.1.g.)	X				
6. Use of hazardous agents, including access to OSHA chemical hazard notices where applicable (Guide, p 20)	X				
7. Animal care and use legislation (Guide, p 17)	X				
8. IACUC function (Guide, p 17)	X				
9. Ethics of animal use and Three R's (Guide, p 17)	X				
10. Occupational Health and Safety of Personnel	A	M	S	C	NA
a. Program is in place and is consistent with federal, state, and local regulations (Guide, p 17)	X				
b. Program covers all personnel who work in laboratory animal facilities (Guide, p 18)	X				
c. Changing, washing, and showering facilities are available as appropriate (Guide, p 19)	X				
d. Hazardous facilities are separated from other areas and identified as limited access (Guide, p 19)	X				
e. Personnel training is provided based on risk (e.g., zoonoses, hazards, personal hygiene, special precautions, animal allergies) (Guide, p 20)	X				
f. Personal hygiene procedures are in place (e.g., work clothing, eating/drinking/smoking policies) (Guide, p 20)	X				
g. Procedures for use, storage, and disposal of hazardous biologic, chemical, and physical agents are in place (Guide, p 21)	X				
h. Personal Protective Equipment for the work area is appropriate and available (Guide, p 21)	X				
i. Program for medical evaluation and preventive medicine for personnel includes:	X				
1. Pre-employment evaluation including health history (Guide, p 22)	X				
2. Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate (Guide, p 22)	X				

Occupational Health and Safety of Personnel (continued)	A	M	S	C	NA
3. Zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague) (Guide, p 23)	X				
4. Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. (Guide, p 23)	X				
5. Promotes early diagnosis of allergies including preexisting conditions (Guide, p 22)	X				
6. Considers confidentiality and other legal factors as required by federal, state and local regulations (Guide, p 22)	X				
7. If serum samples are collected, the purpose is consistent with federal and state laws (Guide, p 22)	X				
j. Waste anesthetic gases are scavenged (Guide, p 21)	X				
k. Hearing protection is provided in high noise areas (Guide, p 22)	X				
l. Respiratory protection is available when performing airborne particulate work (Guide, p 22)	X				
m. Special precautions for personnel who work with nonhuman primates, their tissues or body fluids include:	X				
1. Tuberculosis screening provided for all exposed personnel (Guide, p 23)	X				
2. Training and implementation of procedures for bites, scratches, or injuries associated with macaques (Guide, p 23)	X				
3. PPE is provided including gloves, arm protection, face masks, face shields, or goggles (Guide, p 21)	X				
4. Injuries associated with macaques are carefully evaluated and treatment implemented (Guide, p 23)	X				
n. Occupational safety and health of field studies is reviewed by OSH committee or office (Guide, p 32)	X				
11. Personnel Security	A	M	S	C	NA
a. Preventive measures in place include pre-employment screening, and physical and IT security (Guide, p 23)	X				
12. Investigation and Reporting Animal Welfare Concerns	A	M	S	C	NA
a. Methods for investigating and reporting animal welfare concerns are established (Guide, p 23)	X				
b. Reported concerns and corrective actions are documented (Guide, p 24)	X				
c. Mechanisms for reporting concerns are posted in facility and at applicable website with instructions (Guide, p 24)	X				
1. Includes multiple contacts (Guide, p 24)	X				
2. Includes anonymity, whistle blower policy, nondiscrimination and reprisal protection (Guide, p 24)	X				

Veterinary Care

1. Clinical Care and Management	A	M	S	C	NA
a. Veterinary program offers high quality of care and ethical standards (Guide, p 105)	X				
b. Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia (Guide, p 106)	X				
c. Veterinarian provides oversight to surgery and perioperative care (Guide, p 106)	X				
d. Veterinary care program is appropriate for program requirements (Guide, pp 113-114)	X				
e. Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records (Guide, p 114)	X				
f. Procedures to triage and prioritize incident reports are in place (Guide, p 114)	X				
g. Procedures are in place to address:					
1. Problems with experiments to determine course of treatment in consultation with investigator (Guide, p 114)	X				
2. Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes (Guide, p 114)	X				
3. Veterinary review and oversight of medical and animal use records (Guide, p 115)	X				
h. Procedures established for timely reporting of animal injury, illness, or disease (Guide, p 114)	X				
i. Procedures established for veterinary assessment, treatment, or euthanasia (Guide, p 114)	X				
j. Veterinarian is authorized to treat, relieve pain, and/or euthanize (Guide, p 114)	X				
2. Animal Procurement and Transportation/Preventative Medicine	A	M	S	C	NA
a. Procedures for lawful animal procurement are in place (Guide, p 106)	X				
b. Sufficient facilities and expertise are confirmed prior to procurement (Guide, p 106)	X				
c. Procurement is linked to IACUC review and approval (Guide, p 106)	X				
d. Random source dogs and cats are inspected for identification (Guide, p 106)	X				
e. Population status of wildlife species is considered prior to procurement (Guide, p 106)	X				
f. Appropriate records are maintained on animal acquisition (Guide, p 106)	X				
g. Animal vendors are evaluated to meet program needs and quality (Guide, p 106)	X				
h. Breeding colonies are based on need and managed to minimize numbers (Guide, p 107)	X				
i. Procedures for compliance with animal transportation regulations, including international requirements, are in place (Guide, p 107)	X				
j. Transportation is planned to ensure safety, security and minimize risk (Guide, p 107)	X				
k. Movement of animals is planned to minimize transit time and deliveries are planned to ensure receiving personnel are available (Guide, pp 107-108)	X				

A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety); C = change in program (PHS Policy IV.A.1.a.-i.) (Include in semiannual report to IO and in annual report to OLAW); NA = not applicable

Animal Procurement and Transportation/Preventative Medicine (continued)	A	M	S	C	NA
l. Appropriate loading and unloading facilities are available (Guide, p 109)	X				
m. Environment at receiving site is appropriate (Guide, p 109)	X				
n. Policies in place on separation by species, source, and health status (Guide, pp 109, 111-112)	X				
o. Procedures in place for quarantine to include zoonoses prevention (Guide, p 110)	X				
p. Quarantined animals from different shipments are handled separately or physically separated (Guide, p 110)	X				
q. Procedures in place for stabilization/acclimation (Guide, pp 110-111)	X				
r. Policies in place for isolation of sick animals (Guide, p 112)	X				
s. Program is in place for surveillance, diagnosis, treatment and control of disease to include daily observation (Guide, p 112)	X				
t. Diagnostic resources are available for preventive health program (Guide, p 112)	X				
3. Surgery	A	M	S	C	NA
a. Surgical outcomes are assessed and corrective changes instituted (Guide, p 115)	X				
b. Researchers have appropriate training to ensure good technique (Guide, p 115)	X				
c. Pre-surgical plans are developed and include veterinary input (e.g., location, supplies, anesthetic and analgesic use, peri-operative care, recordkeeping) (Guide, p 116)	X				
d. Aseptic surgery is conducted in dedicated facilities or spaces, unless exception justified and IACUC approved (Guide, p 116)	X				
e. Surgical procedures including laparoscopic procedures are categorized as major or minor (Guide, pp 117-118)	X				
f. For nonsurvival surgery, the site is clipped, gloves are worn and instruments and area are clean (Guide, p 118)	X				
g. Aseptic technique is followed for survival surgical procedures (Guide, pp 118-119)	X				
h. Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place (Guide, p 119)	X				
i. Procedures for monitoring surgical anesthesia and analgesia are in place (Guide, p 119)	X				
j. For aquatic species, skin surfaces are kept moist during surgical procedures (Guide, p 119)	X				
k. Post-operative monitoring and care are provided by trained personnel and documented (e.g., thermoregulation, physiologic function, analgesia, infection, removal of skin closures) (Guide, pp 119-120)	X				
4. Pain, Distress, Anesthesia and Analgesia	A	M	S	C	NA
a. Guidelines for assessment and categorization of pain, distress and animal wellbeing are provided during training (Guide, p 121)	X				
b. Selection of analgesics and anesthetics is based on professional veterinary judgment (Guide, p 121)	X				
c. Painful procedures are monitored to ensure appropriate analgesic management (Guide, p 122)	X				

Pain, Distress, Anesthesia and Analgesia (continued)	A	M	S	C	NA
d. Nonpharmacologic control of pain is considered as an element of postprocedural care (Guide, p 122)	X				
e. Procedures are in place to assure antinoception before surgery begins (Guide, p 122)	X				
f. Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated (Guide, p 122)	X				
g. Special precautions for the use of paralytics are in place to ensure anesthesia ^{xiv}					X
5. Euthanasia	A	M	S	C	NA
a. Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC (Guide, p 123)	X				
b. Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species (Guide, pp 123-124)	X				
c. Training is provided on appropriate methods for each species and considers psychological stress to personnel (Guide, p 124)	X				
d. Procedures and training are in place to ensure death is confirmed (Guide, p 124)	X				
6. Drug Storage and Control	A	M	S	C	NA
a. Program complies with federal regulations for human and veterinary drugs (Guide, p 115)	X				
b. Drug records and storage procedures are reviewed during facility inspections (Guide, p 115)	X				
c. Procedures are in place to ensure analgesics and anesthetics are used within expiration date (Guide, p 122)	X				
d. Anesthetics and analgesics are acquired, stored, and their use and disposal are recorded legally and safely (Guide, p 122)	X				

