Standard Operating Procedures
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Section 1.0: Personnel Qualifications
I. Purpose:

Describes proper attire and daily dress requirements for the CAF. The need for personnel to wear special protective clothing prior to entering specified areas.

II. Scope:

The following dress recommendations for daily activity in the CAF. Supervisors, Technicians, and Animal Caretakers are responsible for maintaining proper attire for each respective CAF area.

III. Equipment/Supplies:

Basic requirements for PPE (personal protective equipment) are contained in the SOP. Included for daily activity are basic protective clothing, hearing protection, hand protection, eye protection, head protection, and respiratory protection. Training is also provided to PI's on the proper use and maintenance of PPE.

IV. Procedure:

A. All personnel entering animal areas/rooms must wear appropriate personal protective clothing, which include cap, gown, mask (required for HSC facilities), gloves, and shoe covers. Hearing and eye protection are provided as needed (hearing protection is required in HSC cage wash facilities).

B. Guidance on the selection and proper use of PPE for selected protocols and/or areas will be provided upon request by the CAF and/or the University EHS/OH. Staff and students who may be exposed to pathogens/hazardous agents are given counseling and instructions on PPE and work daily practices.

C. All personnel are required to wear the minimum/appropriate attire before entering animal areas/rooms.

1. Disposable PPE will be provided by the CAF.
2. PPE will be worn during the time in the animal areas/rooms.
3. PPE will be disposed accordingly prior to leaving the CAF.
I. Purpose:

To maintain a clean environment for both animals and personnel, and to maintain the health integrity of the CAF.

II. Scope:

Personnel are expected to enter the CAF in appropriate street attire, and to maintain a presentable appearance at all times. Change areas, lockers, showers, and scrub suites are provided to employees of the CAF and to University employees upon request. Clean, protective clothing are provided to all employees while working with or around animal areas. Specific protocols or certain areas of the CAF may require special PPE.

III. Equipment/Supplies:

Personal protective equipment¹.

IV. Procedure:

A. Eating, drinking, applying cosmetics, handling contact lenses, and chewing gum are not permitted in any animal facility or research laboratory. Lunch/break rooms are provided for this purpose and will contain employee conveniences.

B. Protective clothing, scrubs, lab coats, and coveralls should not be worn when leaving the CAF, and should never be taken from home.

C. Smoking is not permitted in any of the CAF buildings.

¹ See SOP 1.1: Proper Dress/Attire in Housing Rooms.
Section 2.0: Occupational Health and Safety
I. Purpose:
   To assure Occupational Safety and Health in the CAF.

II. Scope:
   The personal health and safety of all CAF employees is of primary concern and importance. The prevention of occupational-induced injuries and illnesses is given precedence over operational needs, and to the greatest degree possible, CAF will provide administrative controls required for personnel health and safety in the workplace.

III. Equipment/Supplies:
   None.

IV. Procedure:
   A. Policy and procedures as stated in the Temple University Guidelines for CAF staff and individuals that work in and around the animal facilities. Environmental Health and Safety (EHS) is based on relevant on-site occupational health and safety reference materials as listed (attached). EHS, OH, and Infection Control representatives routinely participate in safety walk-through of animal facilities with key CAF staff.

   B. Supervisors provide the information to employees necessary to maintain a safe and healthful workplace. Training is to ensure that accidental injury to personnel is kept to a minimum. The program provides the identification, elimination, reduction and/or control of risks. Supervisors should ensure that all new employees and students are trained in the proper methods of PPE, disposal of biological waste, and understand how to participate in other associated tasks without undue risk.

   Periodic Training Elements:
   1. Emergency response and First Aid
   2. Spill of noxious agents and clean-up procedures Biological and Sharps waste management procedures Use of containment equipment
   3. How to use/read Material Safety Data Sheets (MSDS)¹
   4. Hazards of drug/alcohol/smoking abuse at work
   5. Proper use of Personal Protective Equipment (PPE)
   6. Fire Safety Training

   C. The Animal Exposure Surveillance Component is a health history oriented towards the environment in which animals are used in research. An important element of the OHS/AHP is a medical evaluation and preventative medicine questionnaire. Staff and students who may be exposed to pathogens are given counseling and instructions on PPE, work practices, vaccinations, and diagnostic testing required.

¹ See SOP 2.2: Material Safety Data Sheet
Annual evaluations for participants are:

1. Survey/questionnaire is completed.
2. Vaccinations are updated as needed.
3. Tests (e.g. PPD) for potential exposures are given as required.

D. Accident Reporting: Supervisors are to report all accidents or injurious incidents. Employee illness, exposure, and/or injuries are to report to the main university hospital, Occupational Health Office, or emergency room for injuries occurring during work hours.

E. Emergency Numbers:

1. Occupational/Employee Health: 2-4455
2. Environmental Health and Safety: 2-1600 (call 2-4545 for after-hour emergencies)

F. References

1. Temple University, Guidelines for the Care and Use of Animals, Chapter VII, Occupational Health and Safety
2. Temple University, Health History / Medical Evaluation (Occupational Health and Safety/Animal Hazard Program {OHS/AHP})
I. Purpose:

To provide information on potentially hazardous materials brought on sight into the CAF, and to maintain Material Safety Data Sheets (MSDSs) on site.

II. Scope:

MSDSs are located in notebooks in the Supervisor's office, the cage wash areas, and wherever chemical materials are stored.

III. Equipment/Supplies:

MSDSs, EHS Handbook.

IV. Procedure:

A. MSDSs should be reviewed on an annual basis to ensure they are current.

B. To adhere to all practices and procedures necessary to reduce/minimize self exposure, injury, or contamination in potentially hazardous areas.
   1. Required PPE to be used
   2. Spill and Clean-up procedures
   3. Waste Management procedures
   4. Procedures to follow in the event of an accident
I. Purpose:
Describes requirements for disposal of contaminated sharps.

II. Scope:
Applies to any person disposing contaminated sharps in an animal research facility or laboratory.

III. Equipment/Supplies:
Sharps container.

IV. Procedure:
A. Definitions:
1. *Contaminated* means the presence or the reasonably anticipated presence of potentially hazardous materials on or in an item or surface.
2. *Contaminated sharps* means any contaminated object that can penetrate the skin including, but not limited to, needles, syringes, scalpels, broken glass, used and broken capillary tubes, exposed ends of dental wires, culture dishes, disposable glass coverslips, slides and containers use for blood or plasma sampling, and blood vials.

B. Disposal:
1. Sharps must not be bent, recapped, sheared or broken.
2. Immediately or as soon as possible after use, contaminated sharps must be disposed of in an appropriate container. The container must be:
   a) Puncture resistant;
   b) Labeled and/or color coded according to EHS guidelines;
   c) Leak-proof on the sides and bottom; and
   d) Closable (have a lid);
   e) Labeled “no re-capping needles” and “no trash” (only required for CAF facilities).
3. Only sharps may be disposed of in a sharps container.
4. The lid of the container should be closed following disposal of a sharp. At no time should a sharp be placed into a container if the lid cannot be easily closed.
5. Housekeeping should be contacted for collection once the container is ¾ full.

C. References:
1. Temple University, EHS Handbook, policies 2.1 and 2.3.
Section 3.0: Physical Environment
I. Purpose:

Describes the living space for each type of species housed at the CAF.

II. Scope:

Proper animal caging or housing is critical for proper animal care. Animal caretakers and supervisors are responsible for ensuring that all animals are housed in accordance with recommended guidelines.

III. Equipment/Supplies:

Mouse, rat, guinea pig, rabbit, and cat cages; dog, sheep, and swine runs.

IV. Procedure:

Based upon recommendations in the Guide for the Care and Use of Laboratory Animals, 1996:

A. Mice

<table>
<thead>
<tr>
<th>Weight (g)</th>
<th>#/cage (10.5 x 6.5 x 5) (floor area: 68.25 in²)</th>
<th>#/cage (17 x 9 x 6) (floor area: 153 in²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 25</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>&gt; 25</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>

Mice that soil their cages excessively may be housed in fewer numbers (with PI consent) to reduce additional cage changes.

B. Rats

<table>
<thead>
<tr>
<th>Weight (g)</th>
<th>#/cage (16.5 x 8.5 x 8) (floor area: 140.25 in²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 500</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 500</td>
<td>1</td>
</tr>
</tbody>
</table>

Rats that soil their cages excessively may be housed in fewer numbers (with PI consent) to reduce additional cage changes.

C. Guinea Pigs

<table>
<thead>
<tr>
<th>Weight (g)</th>
<th>#/cage (21.5 x 15 x 10.5) (floor area: 322.5 in²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 350</td>
<td>5</td>
</tr>
<tr>
<td>&gt; 350</td>
<td>3</td>
</tr>
</tbody>
</table>

D. Rabbits

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/cage (28 x 23 x 18.5) (floor area: 4.47 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 5.4</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 5.4</td>
<td>0</td>
</tr>
</tbody>
</table>

E. Cats

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/cage (63.5 x 31 x 51) (floor area: 13.67 ft²)</th>
<th>#/cage (39 x 49.5 x 35) (floor area: 13.41 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>&gt; 4</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Every cat also requires a raised resting surface.
### F. Dogs

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/run (73 x 32) (floor area: 16.22 ft²)</th>
<th>#/run (72 x 48) (floor area: 24 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 50</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/run (80 x 45.5) (floor area: 25.28 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 50</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>1</td>
</tr>
</tbody>
</table>

The height of each is sufficient to let the dog stand in a “comfortable position”.

### G. Sheep

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/run (73 x 32) (floor area: 16.22 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 50</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>0</td>
</tr>
</tbody>
</table>

The height of each is sufficient to let the sheep stand in a “comfortable position”.

### H. Swine

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/run (73 x 32) (floor area: 16.22 ft²)</th>
<th>#/run (72 ½ x 49) (floor area: 24.6ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 25</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>&gt; 25, ≤ 50</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 50, ≤ 100</td>
<td>*</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 100, ≤ 200</td>
<td>0</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>#/run (72 x 48) (floor area: 24 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 25</td>
<td>4</td>
</tr>
<tr>
<td>&gt; 25, ≤ 50</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 50, ≤ 100</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 100, ≤ 200</td>
<td>*</td>
</tr>
</tbody>
</table>

*Double Run Required

The height of each is sufficient to let the swine stand in a “comfortable position”.
I. Purpose:

Describes the additional procedures to be followed in caring for rat and mouse breeding colonies and the application of the “Pup Found” card.

II. Scope:

The following are the duties that must be performed each day. Animal Caretakers assigned a room in which rats or mice are bred are responsible for completing these duties.

III. Equipment/Supplies:

Fluorescent Pink “Pup Found” notification labels, 3” x 5” cards, an ink pen and Nestlets™.

IV. Procedure:

A. Whenever a newly born litter is found, the caretaker or researcher should immediately fill out a “Pup Found”, place it behind the existing cage card so that the label is visible, and move adults other than the mother to a new cage.

B. Record the following on the label: date the pups were found, total number of pups, number of pups found alive, number found dead (remove these) and the prospective weaning date (28 days) 1.

C. Place the completed card in that cage’s cardholder upright behind the pre-existing cage card.

D. Any change in litter status, i.e. additional pups found dead or alive at a later time, should be noted on the “Pup Found” card.

E. Cages should not be changed before pups are 3 days old, or as per the investigator’s request (flooded or cages with condensation are the exception).

F. In changing a cage with a litter, check the date of birth to determine if cage should be changed at that time.

G. Nestlets™ should be provided for pregnant mice or rats before parturition if approved by the investigator.

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1 IACUC approves additional week to allow researcher the ability to wean after typical 21 days under individual circumstances. Requests for exceptions to this policy (i.e. weaning beyond 28 days) must be made in writing to IACUC.
I. Purpose:

Describes daily requirements for application of the “OVERCROWDED” card in rat and mouse colonies.

II. Scope:

The following are the duties that must be addressed each day. Animal Caretakers assigned a room housing rats or mice are responsible for completing these duties.

III. Equipment/Supplies:

Fluorescent green “OVERCROWDED” notification label, 3” x 5” card, and an ink pen.

IV. Procedure:

A. During, but not limited to AM/PM checks or cage changing, when a caretaker notices an overcrowded cage\(^1\), he/she is to immediately place an “OVERCROWDED” card in the cage cardholder. The fluorescent green “OVERCROWDED” label is to be visible.

B. Record the date that the overcrowded cage was discovered and the total number of animals in that cage.

C. Call the investigator or their lab to notify them of the overcrowded situation. Document to whom you spoke on the green label.

D. Indicate on the green label our date of action (ODOA), which is three work-days (M-F) after discovery, and notification of P.I.

E. At ODOA, if there has been no response from the investigator or their technical support team, the caretaker assigned to this room is to wean/separate the cage.

F. Indicate the number of animals weaned and the number of cages generated as a result of the weaning/separation on the census sheet in the add column with the letter “w” for wean, or the letter “s” for separated, before the numbers, i.e. “w” 50 animals/10 cages, “s” 25 animals/5 cages, and the caretaker’s initials.

G. In addition to the information already required on a cage card\(^2\), each generated cage from a weaning/separation is to correspond with the original cage from which it was generated; i.e., original cage is labeled “A”. Cages generated from “A” are labeled “A” with a circle around it.

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\(^1\) To identify an overcrowded cage, see SOP 3.1: Animal Space Requirements.

\(^2\) See SOP 6.1: Cage Card Requirements.
Section 4.0: Behavioral Management
I. Purpose:

Describes the methods and practices providing Environmental Enrichment for laboratory animals housed in the CAF Animal Facilities.

II. Scope:

A general practice of environmental enrichment is routinely implemented by supervisors and overseen by caretakers for animals maintained in the CAF. The scope follows the program of operation for maintaining environmental enrichment as described in the assurance statement (OLAW/PHS) and the AAALACi program description.

III. Equipment/Supplies:

A various array of playthings, toys, and apparatus are used to provide different species of laboratory animals with incentivized activity. Plastic see-thru rodent cages are used throughout, along with plastic mini-domes, see-thru rolls, wiffle balls, plastic balls (with chains), dumb bells, ring chains, chompy-chews, and nestlets.

IV. Procedure:

A. Unless otherwise requested by the PI, all animals in the CAF facilities receive some form of environmental enrichment/social activity. All mice and rats are housed in see-thru boxes. All animal boxes, cages or pens meet or exceed appropriate size standards (ILAR Guide). All animals are housed with the same species, and are group housed to the greatest extent possible.

B. Methods by species:

1. Small animals (rodents, guinea pigs, and rabbits) are provided with enrichment devices.
2. Rabbits, Cats, and Dogs are provided with play toys and daily human interaction.
3. Larger animals (pigs and sheep) are provided with large plastic balls and have daily human interaction.

C. Social Environment:

An ongoing program for socialization of animals exists in the CAF. Caretakers and technicians are trained to provide as much socialization for animals as possible. Administrative personnel are encouraged to interact with the dogs and cats.

Most of the mice and rats are group housed in appropriate size see-thru plastic cages with enrichment devices (except for minimal PI exception). Rabbits and guinea pigs are individually housed in open drawer-like plastic cages with enrichment devices. Dogs are routinely allowed out of the pens during daily cleaning routines to exercise and socialize with other dogs. Swine, depending on size, are also released from their pens to interact with other swine.

New large animal caging (pens) are designed to have see-thru sidebars so animals can see each other and pullout sidebars so animals may be allowed to intermingle. Frequently, sheep
are group housed for social contact. Cats, through the use of the CAF-designed “cat condominium” are able to interact with each other and also have levels to climb and hide.
Section 5.0: Husbandry
I. Purpose:

Describes the procedure for room sanitation using chlorine dioxide (Clidox™).

II. Scope:

Proper room sanitation is critical to our animal care program. It is an important part of maintaining a pathogen free environment for the animals in our care. Animal caretakers and supervisors are responsible for following this SOP. Contact supervisor prior to performing procedure in rooms with animals.

III. Equipment/Supplies:

Clidox™ base, Clidox™ activator, water, graduated bucket, upright scrubber and pad, Versa-Terg™, plastic bag, masking tape, clean cloths, PPE (gown, cap, boots/shoe covers, eye protection, chemical resistant gloves), step ladder, and two biohazard bags.

IV. Procedure:

A. Mixing Chemical

1. Don the recommended personal protective equipment (PPE).
2. Follow the manufactures directions for mixing Clidox™, 1:18:1.
3. Using a graduated bucket for measuring, mix enough Clidox™ in a clean mop bucket to sanitize a room. After mixing, one must wait 15 minutes before using.

B. Prepare the room for sanitizing

1. Remove any disposable supplies, pest monitoring traps or paper towels from the room.
2. Remove all liners and debris from feed and waste barrels. Pre-wash the barrels as needed with Versa-Terg™ (alkaline detergent) and rinse.
3. Completely cover all animal cages or racks with drapes. If possible remove them from the room.
4. Using plastic bags and masking tape protect all sensitive permanently mounted items (i.e. light switches, intercom stations, thermostats, outlets etc.)
5. Sweep the floor and wash any soiled areas with Versa-Terg™ then rinse with water.

C. Sanitizing the room

1. Don appropriate PPE including eye protection.
2. Dip the upright scrubber with pad into the Clidox™ and shake out excess. This will be repeated as needed to ensure that all areas of the ceiling, walls, and floor will be exposed to the Clidox™.
3. If a hood is not available, skip to 4. Otherwise
   a) Wipe down the entire hood inside/out, including the chamber housing the filters.
b) Remove filters from the chamber below and place them in two biohazard bags (perform monthly if the hood is used constantly, annually if the hood is used intermittently).

4. Continue with the ceiling. In an organized pattern using light pressure wipe the entire ceiling with the upright scrubber pad. Repeat step 2 frequently.

5. Sanitize air vents, sprinkler heads, and other ceiling mounted obstructions by hand with a clean cloth dipped in Clidox™, use a step ladder if needed.

6. Sanitize the walls working from top to bottom, wipe in an organized pattern. Repeat step 2 frequently.

7. With the clean cloth dipped in Clidox™ wipe down the doorframe, jamb, and closer as well as the tool holder or any other wall mounted obstruction.

8. Wipe down the exterior of the hood, if one is in the room, with Clidox™, working from top to bottom.

9. Scrub the floor with the upright scrubber, repeating step 2 frequently. Move shelves, racks, and cart etc… to allow for the entire floor to be sanitized.

10. Room tools such as brooms, squeegees, and dustpans can be hand sanitized by wiping them with Clidox™ or if durable can be run through the cage washer.

11. Remove bags and tape from the sensitive areas and sanitize these with a clean cloth dampened with Clidox™

12. Wipe down the feed barrel and lid inside and out, with a clean cloth dampened with Clidox™.

13. Remove drain cover and sanitize drain lip and strainer being certain all debris is removed or flushed down the drain.

14. Replace items removed from the room, remove drapes from animal cages or racks.

15. After the proper contact time for Clidox™ (5 minutes) mop the floor using a clean mop and water.
I. Purpose:
Describes the acquisition and use of feed and bedding.

II. Scope:
This covers the procedures for ordering, receiving, storing, and using animal feed and bedding. Supervisors and animal caretakers are responsible for seeing that these guidelines are followed.

III. Equipment/Supplies:
Feed barrels, pallets, feed racks, scoops.

IV. Procedure:
A. All feed and bedding will be purchased from an approved vendor unless IACUC protocol or veterinary issues dictate otherwise.
B. Feed and bedding requests must be submitted to the Senior Supervisor or designee by 4pm every other Tuesday.
C. Feed and bedding is ordered the next day (Wednesday) by the Senior Supervisor or designee.
D. Feed and bedding will be received the Friday of that week at each facility. Reject delivery of any bags that are torn, or any feed that is within two months of its expiration date.
E. Feed Storage:
1. Each facility has dedicated rooms for storage of feed and bedding. Doors to these rooms must not be propped open. Feed and bedding must be off the floor and at least six inches from any wall. Stock must be rotated so it is used on a “first in-first out” basis.¹
2. In animal rooms, feed will be stored only in a designated feed barrel. This will be lined with a plastic bag and under the lid will be a feed label listing (to be updated as a new bag of feed is put in the barrel) the following:
   a) type of feed
   b) species
   c) date opened
   d) mill date
   e) expiration date
   f) lot number

F. Minimum Feeding Requirements²

¹ Feed will be used within six months of its milling date. Any feed older than six months will be discarded. Guinea pig feed manufactured by Purina has a six-month shelf life. All other guinea pig feed must be discarded after three months.
² Source: PMI Feeds, Inc. Animal Diet Reference Guide. This may be modified by Veterinarian or PI.
1. Rats and mice are fed an appropriate diet ad lib, unless otherwise required, but not more than can be consumed in a week’s time.
   a) Mice on average will consume: 4-5 grams per day
   b) Rats on average will consume: 12-25 grams per day

2. Guinea pigs are fed an appropriate vitamin C enriched diet ad lib but not more than can be consumed in a few days time.
   The average guinea pig will consume: 35 grams per day

3. Rabbits are fed a maintenance diet of 125 grams of rabbit feed each day. New arrivals are fed an acclimation diet as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (arrival)</td>
<td>No Food</td>
</tr>
<tr>
<td>2</td>
<td>25 g</td>
</tr>
<tr>
<td>3</td>
<td>50 g</td>
</tr>
<tr>
<td>4-7</td>
<td>100 g</td>
</tr>
<tr>
<td>Beginning 7</td>
<td>125 g</td>
</tr>
</tbody>
</table>

4. Cats are fed an appropriate dry food ad lib. With veterinary approval this may be supplemented with canned food. (cats require 24 grams/kg body weight of food daily).

5. Dogs are fed an appropriate dry food twice each day as noted below. This may be supplemented with canned food with veterinary approval. (dogs require 25-40 grams/kg body weight of food daily).

   Feed dry food as follows:

<table>
<thead>
<tr>
<th>Weight</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 10 kg</td>
<td>200 g AM and PM</td>
</tr>
<tr>
<td>&gt; 10 kg, ≤ 20 kg</td>
<td>400 g AM and PM</td>
</tr>
<tr>
<td>&gt; 20 kg, ≤ 30 kg</td>
<td>600 g AM and PM</td>
</tr>
<tr>
<td>&gt; 30 kg, ≤ 40 kg</td>
<td>800 g AM and PM</td>
</tr>
</tbody>
</table>

6. Swine are fed an appropriate diet twice each day (pigs are to be given 2-3% of body weight in food) as follows:

<table>
<thead>
<tr>
<th>Weight</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 25 kg, ≤ 50 kg</td>
<td>500 g AM and PM</td>
</tr>
<tr>
<td>&gt; 50 kg, ≤ 75 kg</td>
<td>750 g AM and PM</td>
</tr>
<tr>
<td>&gt; 75 kg, ≤ 100 kg</td>
<td>1,000 g AM and PM</td>
</tr>
<tr>
<td>&gt; 100 kg, ≤ 125 kg</td>
<td>1,250 g AM and PM</td>
</tr>
</tbody>
</table>

7. Lambs are bottle fed Similac with Iron™ immediately upon arrival and offered every 2-4 hours, during the day, thereafter.

8. Sheep are fed an appropriate diet twice each day (sheep are to be given 2-3% of body weight in food) as follows:
G. An approved contact bedding will be used for all rodents and guinea pigs, unless the protocol or veterinarian dictates otherwise. Rabbits are housed in suspended caging and will use an approved non-contact bedding. Dogs, sheep, lambs, and swine are housed in raised kennels where no bedding is required. Any changes must be approved by the Veterinarian.
I. Purpose:

To determine the efficacy of the sanitation procedures for cage wash areas, animal room racks and boxes, and related equipment; using microbial monitoring methods incorporating “Rodac Plates” (containing trypticase soy agar with lecithin and polysorbate 80).

II. Scope:

A general practice of quality assurance for sanitation is implemented by the supervisors and routinely overseen by caretakers for animals maintained in the CAF. The scope follows the program of operation for maintaining environmental monitoring as described below.

III. Equipment/Supplies:

A commercial supply of Rodac Plates™ obtained from the Pharmacal Research Laboratories, Inc. The incubation and reporting of the results will be done by Pharmacal’s Quality Assurance Dept. A quarterly report will be generated, maintained for reference and available from the CAF administrative office.

IV. Procedure:

A. Frequency of Monitoring:

Cage wash areas, selected animal rooms, corridors and related equipment will be routinely evaluated at a minimum of once per quarter of the calendar year. A supervisor will oversee the testing of the selected areas, so as to maintain and assure quality control and correct monitoring procedures (service contract).

1. Suggested sampling sites:
   a) Cage Wash Area
      i. Cages(s) prior to washing in cage washer
      ii. Same site of cage immediately following cage washing procedures
      iii. Inside wall of cage washer units
      iv. Side holding tank(s) of cage washer unit (where applicable)
   b) Animal Rooms
      i. Center of floors
      ii. Baseboard of side walls
      iii. Side wall approximately 2 feet above baseboards
      iv. Sink or drain areas
      v. Ceiling near exhaust fans
   c) Cubicles
      i. Center of floors
ii. Baseboard of side walls

iii. Back wall near exhaust areas

iv. Inside front of glass doors

d) Housing Units

i. Inside corner of catch pans

ii. Inside back wall of cage pans

iii. Animal contact point of flooring

e) Service Corridors

i. Floor baseboards

ii. Wall and door frame areas

iii. Ceiling near exhaust ducts (where applicable)

iv. Outside surface of animal holding doorways

f) Clean Corridors

i. Floor baseboards

ii. Wall and door frame areas

iii. Ceiling near exhaust ducts (where applicable)

iv. Outside surface of animal holding doorways

B. Sampling Procedures:

1. Surfaces must be sampled within 24 hours of sanitation procedures.

2. The edge of the Rodac Plate™ is held between the thumb and middle finger with the index finger applied to the middle of the bottom. The cover will be removed and the Agar surface of the plate applied to the sampling site, exerting mild pressure. Should the plate move sideways, smearing will result and the plate should be discarded. The cover will be replaced and taped to the plate. Using a standard marker, the plate should be labeled with: date, location, and locations and other information on the enclosed data sheet.

3. The samples must be placed with ice packs and shipped Next Day (overnight delivery) to Pharmacal Research Laboratories, Inc., 33 Great Hill Rd., Naugatuck, CT 06770. The plates will be incubated for 48 – 72 hours at 35 – 37 C. When the incubation is completed, the plates will be counted for bacterial and fungal colonies. Incubation time for special media vary.

4. A report of the results will be provided within 2 to 3 weeks of receipt of the Rodac Plates™, which must be inoculated with the procedures outlined above. The report will be mailed to the CAF Administrative Office. A copy of the report will be maintained in the Pharmacal Research Laboratories, Inc. files for a period not to exceed one (1) year.
5. A colony count represents both bacterial and fungal counts. The following suggested guidelines for numbers of CFU (colony forming units) can be used to evaluate the results in accordance with the sanitation levels achieved:

a) CFU Evaluation:
   i. Count less than 10 is considered good
   ii. Count between 10 and 25 considered fair
   iii. Count in excess of 25 considered poor

b) Examples:
   i. Surgery table: an acceptable level should be 0
   ii. Critical care areas: an acceptable level should be 0
   iii. Hallway floor: an acceptable level should be 25 or less
   iv. Wall: an acceptable level should be 25 or less
   v. Counter/Table Tops: an acceptable level should be 0 to 5
   vi. Animal Cage: an acceptable level should be 0 to 5

6. Any bacterial or fungal count over 15, except for hallways and walls, deems a re-evaluation of sanitation procedures and a re-test within 10 days.
I. Purpose:

Describes requirements for rooms housing rats or mice.

II. Scope:

The following are the duties that must be addressed. Animal caretakers assigned a room housing guinea pigs are responsible for completing these duties.

III. Equipment/Supplies:

Standard racks, high density racks, stainless steel lids, filter top lids, bedding, water bottles, sipper tubes, quaternary ammonia (quat) cleaner, card holders. In addition, pen, animal cards, aon cards, sanitizing solution, proper PPE, wypalls, wall washer mop, broom, dust pan, and digital hygrometer/thermometer.

IV. Procedure:

A. Daily:

1. Observe the health status of each animal.
2. Check for adequate levels of food and water.
3. Document temperature/humidity readings (min/max/present), then clear the digital hygrometer/thermometer.
4. Check for new born litters in rat and mouse breeding colonies.¹
5. Check for overcrowded cages in rat and mouse colonies.²
6. Check for feed/chemical expiration dates.
7. Check sharp container levels.³ Full container should be stored near biohazard waste bin located next to cagewash for pick-up.
8. Check each feeder to see if it has become contaminated with urine, feces, or feed dust. Replace feeder if it becomes contaminated.
9. Refill water bottle as needed, or if equipped with automatic watering, check to verify that the system is functioning.
10. Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be noted and reported to the supervisor before noon for AM checks and by 3:45 for PM checks.
11. Refill any supplies used in room.
12. Wipe clean with a quat cleaner all shelves, tables, and feed barrels.

¹ See SOP 3.2: Daily Check for Pups in Rat and Mouse Breeding Colonies.
² See SOP 3.3: Daily Check for Overcrowding in Rat and Mouse Colonies.
³ See SOP 2.3: Disposal of Contaminated Sharps.
13. Sweep or hose down the floor including under shelves, tables, and cage units. Squeegee floor if wet.

14. Documentation: Record temperature (min/max), humidity (min/max), AM check time, feed checked, water checked, shelved cleaned, floor swept, PM check time, caretaker’s initials, and census sheet to reflect daily changes.

B. Weekly:

1. All cages must be changed at least once per week. More frequent changes may be required due to cage population, flooding, veterinarian or investigator request.

2. All water bottles, stoppers, and sipper tubes must be changed at a minimum of once per week.

3. All metal cage lids and plastic microisolator lids must be changed at least once every two weeks.

4. Air vents will be wiped with a quat cleaner.

5. Any floor drain will be cleaned once a week, more frequently if needed. Always replace drain plug and cover when finished.

6. The door, door frame, any stainless steel or windows will be cleaned at a minimum of once each week with a quat cleaner.

7. Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and that torn or dirty liners are replaced.

8. Count each animal and record the number on the census sheet on the day of the cage change.

9. Documentation: Cages changed, bottles changed, vents cleaned, and floor drains cleaned.

C. Monthly:

1. All shelves or racks must be sanitized at least once each month. This can be accomplished either by the use of a chemical sanitizer or by the cage washer. Shelves should be completed dry before being used.

2. Each feed barrel is to be sanitized and allowed to dry completely before being used again.
   a) Remove feed, liners, label, and any debris.
   b) Run barrel through cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.
   c) Replace with new liner and label, and replace feed.
3. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.\(^1\)

4. The exterior of all laminar flow hoods must be sanitized once per month with a quat cleaner.

5. Documentation: Record after sanitizing rooms, feed barrels, shelves, racks, tables or hood exterior.

\(^1\) See SOP 5.1: Room Sanitation.
I. Purpose:

Describes requirements for rooms housing guinea pigs.

II. Scope:

The following are the duties that must be addressed. Animal caretakers assigned a room housing guinea pigs are responsible for completing these duties.

III. Equipment/Supplies:

IV. Procedure:

A. Daily

1. Check cages to determine the health status of each animal, whether food or water needs to be added, if an immediate cage change needs to be completed, or the cage is overcrowded. This is to be done both AM and PM unless otherwise instructed.

2. Check each feeder to see if it has become contaminated with urine, feces, or feed dust. Replace feeder if it becomes contaminated.

3. Refill water bottle as needed, or if equipped with automatic watering, check to verify that the system is functioning.

4. Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be noted and reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.

5. Refill any supplies used in room.

6. Wipe clean with a quat cleaner all shelves, tables, and feed barrels.

7. Sweep or hose down the floor including under shelves, tables, and cage units. Squeegee floor if wet.

8. Documentation: Record temperature, humidity, AM check time, feed checked, water checked, shelved cleaned, floor swept, PM check time, caretakers initials, and census sheet to reflect daily changes.

B. Weekly:

1. All cages must be changed at least twice per week. More frequent changes may be required due to cage population, flooding, veterinarian or investigator request.

2. All water bottles, stoppers, and sipper tubes must be changed at a minimum of three times each week.

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1 See SOP 8.3: Animal Health Surveillance
2 See SOP 5.2: Feed and Bedding
3 See SOP 3.1: Animal Space Requirements
3. If using automatic water, the cage and system should be flushed for at least five minutes each time the cage is changed.

4. Air vents will be wiped with a quat cleaner.

5. Any floor drains will be cleaned once each week, more frequently if needed. Always replace drain plug and cover when finished.

6. The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week.

7. Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date (three months if not manufactured by Purina), and that torn or dirty barrel liners are replaced.

8. Count each animal and record the number on the census sheet.

9. Documentation: Cages changed, bottles changed, vents cleaned, and floor drains cleaned.

C. Monthly:

1. All shelves, racks or tables must be sanitized at least once each month. This can be accomplished either by the use of a chemical sanitizer or by the cage washer. Shelves should be completely dry before being used.
   a) Each feed barrel is to be sanitized and allowed to dry completely before being used again.
   b) Remove feed, liners, label, and any debris.
   c) Run barrel through the cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.

2. Replace with new liner and label, and replace feed.

3. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.4

4. Documentation: Record after sanitizing rooms, feed barrels, shelves, racks, or tables.

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4 See SOP 5.1: Room Sanitation
I. Purpose:

Describes requirements for rooms housing rabbits.

II. Scope:

The following are the duties that must be addressed. Animal caretakers assigned a room housing rabbits are responsible for completing these duties.

III. Equipment/Supplies:

IV. Procedure:

A. Daily:

1. Check cages to determine the health status of each animal, feed as directed, if an immediate cage or liner change needs to be completed, or the cage is overcrowded. This is to be done both AM and PM unless otherwise instructed.

2. Check each feeder to see if it has become contaminated with urine, feces, or feed dust. Replace feeder and feed as needed.

3. Refill water bottle as needed, or if equipped with automatic watering check to verify that the system is functioning.

4. Environmental checks including temperature, humidity, lighting, noise, odors, or maintenance concerns should be noted and reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.

5. Refill any supplies used in room.

6. Wipe clean all tables and feed barrels with a quat cleaner.

7. Sweep or hose down the floor including under the tables and cage units. Squeegee floor if wet.

8. Documentation: Record temperature, humidity, Am check time, time fed, water checked, shelves cleaned, floor swept, PM check time, caretakers initials, and census sheet to reflect daily changes.

B. Weekly:

1. All pan liners must be changed at least three times per week. More frequent changes may be required due to cage population, flooding, veterinarian or investigator request.

2. All rabbit units are to be changed at least every other week.

1 See SOP 8.3: Animal Health Surveillance
2 See SOP 5.2: Feed and Bedding
3 See SOP 3.1: Animal Space Requirement
3. All enrichment toys must be sanitized in the cage washer at least every other week. After sanitizing, rotate the toys among the rabbits.

4. All water bottles, stoppers, and sipper tubes must be changed at a minimum of three times each week.

5. If using automatic water, the cage and system should be flushed for at least five minutes once each week and each time the cage is changed.

6. Air vents will be wiped with a quat cleaner.

7. Any floor drains will be cleaned once each week, more frequently if needed. Always replace drain plug and cover when finished.

8. The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week.

9. Feed barrels must be checks each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and that torn or dirty barrel liners are replaced.

10. Documentation: Cages changed, bottles changed, vents cleaned, and floor drains cleaned.

C. Monthly:

1. Tables must be sanitized at least once each month. This can be accomplished either by the use of a chemical sanitizer or by the cage washer. Table should be completely dry before being used.

2. Each feed barrel is to be sanitized and allowed to dry completed before being used again.
   a) Remove feed, liners, label, and any debris.
   b) Run barrel through the cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.
   c) Replace with new liner and label, and replace feed.

3. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.4

4. Documentation: Record after sanitizing rooms, feed barrels, or tables.

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4 See SOP 5.1: Room Sanitation.
I. Purpose:
   Describes requirements for rooms housing cats.

II. Scope:
   The following are the duties that must be addressed. Animal caretakers assigned a room housing cats are responsible for completing these duties.

III. Equipment/Supplies:
   PPE, sanitizing equipment (wallwasher, bucket, protective eye wear), pen and quaternary ammonium (quat) cleaner.

IV. Procedure:
   A. Daily
      1. Check cages to determine the health status of each animal, if an immediate cage or litter pan change needs to be completed, or if the cage is overcrowded. This is to be done both AM and PM unless otherwise instructed.
      2. Using a sanitized feeder, feed as directed.
      3. Give the cats fresh water in a sanitized bowl.
      4. Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be noted and reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.
      5. Refill any supplies used in room.
      6. Wipe clean all tables and feed barrel lids with a quat cleaner.
      7. Sweep or hose down the floor including under tables and cage units. Squeegee floor if wet.
      8. Any floor drains will be cleaned at least once each day, more frequently if needed. Always replace drain plug and cover when finished.
      9. Documentation: Record temperature, humidity, AM check time, time fed, water filled, tables cleaned, floor swept, PM check time, drains cleaned, caretakers initials, and census sheet to reflect daily changes. Also, write in the individual animal’s medical record any abnormality noted when determining each animal’s health status.

   B. Weekly:

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1 See SOP 8.3: Animal Health Surveillance
2 See SOP 3.1: Animal Space Requirements
3 See SOP 5.2: Animal Feed and Bedding
1. All litter pans must be changed at least three times per week. More frequent changes may be required due to cage population, flooding, veterinarian, investigator or supervisor request.

2. All housing units are to be changed at least every other week.

3. All enrichment toys must be sanitized in the cage washer at least every other week. After sanitizing, rotate the toys among the cats.

4. Air vents will be wiped with a quat cleaner.

5. The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week with a quat cleaner.

6. Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and that torn or dirty barrel liners are replaced.

7. Documentation: housing units changed and vents cleaned.

C. Monthly:

1. Tables must be sanitized at least once each month. This can be accomplished either by the use of a chemical sanitizer or by the cage washer. Tables should be completely dry before being used.

2. Each feed and litter barrel is to be sanitized and allowed to dry completely before being used again.
   a) Remove feed or litter, liners, labels, and any debris.
   b) Run barrel through cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.
   c) Replace with new liner and label, and replace feed or litter.

3. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.4

4. Documentation: Record after sanitizing rooms, feed and litter barrels, and tables.

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4 See SOP 5.1: Room Sanitation
I. Purpose:

Describes requirements for rooms housing dogs.

II. Scope:

The following are the duties that must be addressed. Animal caretakers assigned a room housing dogs are responsible for completing these duties.

III. Equipment/Supplies:

PPE, sanitizing equipment (wallwasher, bucket, protective eye wear), pen and quaternary ammonium (quat) cleaner.

IV. Procedure:

A. Daily:

1. Check runs to determine the health status of each animal\(^1\), and if immediate sanitation needs to be completed. This is to be done both AM and PM unless otherwise instructed.

2. Using a sanitized feeder, feed as directed.\(^2\)

3. Give the dogs fresh water in a sanitized bowl in the morning and refill at the PM check time.

4. Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be noted and reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.

5. Refill any supplies used in room.

6. Wipe clean all feed barrels lids with a quat cleaner.

7. Hose down the runs, the floor under the runs, and the corridor. Make sure all feces and other debris is flushed down the drains. Do not get the dogs wet. Replace the drain covers. Squeegee floor if wet.

8. Documentation: Record temperature, humidity, AM check time, time fed, water filled, floor hosed, runs cleaned, drains cleaned, PM check time, caretakers initials, and census sheet to reflect daily changes. Also, write in the individual animal’s medical record any abnormality noted when determining each animal’s health status.

B. Weekly:

1. All runs must be sanitized at least once each week. Runs must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.

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\(^1\) See SOP 8.3: Animal Health Surveillance
\(^2\) See SOP 5.2: Feed and Bedding
a) Place dog into a dry, already sanitized run. If one is not available place dog in a transport cage.

b) With a hose prewash the run, removing all feces and other debris. Flush this down the drain.

c) Using the sprayer mounted in each room hose down the entire run, working from the ceiling to the floor, with a quat cleaner.

d) With an upright scrubber and pad wipe down the entire run, working from the ceiling to the floor.

e) After 10 minutes of contact time, the run should be rinsed clean of any chemical and allowed to dry.

2. Air vents will be wiped with a quat cleaner.

3. The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week.

4. All enrichment toys must be sanitized once each week. After sanitizing, rotate the toys among the dogs. Either soak them in a bucket of quat for a minimum of ten minutes and then rinse clean, or run them through the cage washer.

5. Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and that torn or dirty barrel liners are replaced.

6. Documentation: Runs sanitized, vents cleaned, and floor drains cleaned.

C. Monthly:

1. Each feed and litter barrel is to be sanitized and allowed to dry completely before being used again.

   a) Remove feed, liners, labels, and any debris.

   b) Run barrel through cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.

   c) Replace with new liner and label, and replace feed.

2. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.³

3. Documentation: Record after sanitizing rooms and feed barrels.

³ See SOP 5.1: Room Sanitation
I. Purpose:

Describes requirements for rooms housing swine.

II. Scope:

The following are the duties that must be addressed. Animal caretakers assigned a room housing swine are responsible for completing these duties.

III. Equipment/Supplies:

IV. Procedure:

A. Daily:

1. In raised kennel:
   a) Check runs to determine the health status of each animal\(^1\) and if immediate sanitation needs to be completed. This is to be done both AM and PM unless otherwise instructed.
   b) Using a sanitized feeder, feed as directed.\(^2\)
   c) Give the swine fresh water in a sanitized bowl and refill at least twice each day.
   d) Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be noted and reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.
   e) Refill any supplies used in room.
   f) Wipe clean all feed barrels lids with a quat cleaner.
   g) Hose down the runs, the floor under the runs, and the corridor. Make sure all feces and other debris is flushed down the drains. Do not get the swine wet. Replace the drain covers. Squeegee floor if wet.
   h) Documentation: Record temperature, humidity, AM check time, time fed, water filled, floor hosed, runs cleaned, drains cleaned, PM check time, caretakers initials, and census sheet to reflect daily changes. Also, write in the individual animal’s medical record any abnormality noted when determining each animal’s health status.

2. On bedding:
   a) Check runs/rooms to determine the health status of each animal\(^3\) and if immediate sanitation needs to be completed. This is to be done both AM and PM unless otherwise instructed.

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\(^1\) See SOP 8.3: Animal Health Surveillance
\(^2\) See SOP 5.2: Feed and Bedding
\(^3\) See SOP 8.3: Animal Health Surveillance
b) Using a sanitized feeder, feed as directed\(^4\).

c) Give the swine fresh water in a sanitized bowl and refill at least twice each day.

d) Environmental checks: temperature, humidity, lighting, noise, odors or maintenance concerns should be evaluated with abnormalities reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.

e) Refill any supplies used in room.

f) Wipe clean all feed barrels lids with a quaternary ammonia cleaner.

g) Spot clean soiled areas, by removing animal waste and soiled or wet bedding. Add additional bedding to maintain a minimum of 4” depth.

h) Documentation: Record temperature, humidity, AM check time, time fed, water filled, runs cleaned, PM check time, caretakers initials, and census sheet to reflect daily changes. Also, write in the individual animal’s medical record any abnormality noted when determining each animal’s health status.

B. Weekly:

1. In raised kennel:

   a) All runs must be sanitized at least once each week. Runs must be also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.

      i. Place pig into a dry, already sanitized run. If none are available, place pig in a transport cage.

      ii. With a hose prewash the run, removing all feces and other debris. Flush this down the drain.

      iii. Using the sprayer mounted in each room hose down the entire run, working from the ceiling to the floor, with a quaternary ammonium cleaner.

      iv. With an upright scrubber and pad wipe down the entire run, working from the ceiling to the floor.

      v. After 10 minutes of contact time, the run should be rinsed clean of any chemical and allowed to dry.

   b) Air vents will be wiped with a quaternary ammonium cleaner.

   c) The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week.

   d) All enrichment toys must be sanitized once each week. After sanitizing, rotate the toys among the swine. Either soak them in a bucket of quaternary ammonium for a minimum of ten minutes and the rinse clean, or run them through the cage washer.

\(^4\) See SOP 5.2: Feed and Bedding
e) Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and that torn or dirty barrel liners are replaced.

f) Documentation: Runs sanitized, vents cleaned, and floor drains cleaned.

2. On bedding:
   a) All run/rooms must be sanitized at least once each week. Runs must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.
      i. Place swine into a dry, already sanitized run. If none are available, place swine in a transport cage. Be sure no cleaning/disinfecting agents are in contact with swine.
      ii. Using a broom and dust pan or shovel pick up all bedding and animal waste and dispose of it in a red bag.
      iii. With a hose prewash the area, removing all feces and other debris. Flush this down the drain.
      iv. Using the hand foamer hose down the entire area, working from the ceiling to the floor, with a quaternary ammonia (quat) cleaner.
      v. With an upright scrubber and pad wipe down the entire area, working from the ceiling to the floor
      vi. After 10 minutes of contact time, the area should be rinsed clean of any chemical and allowed to dry.

b) Air vents will be wiped with a quat cleaner.

c) The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week.

d) All enrichment toys must be sanitized once each week. After sanitizing, rotate the toys among the swine. Either soak them in a bucket of quat for a minimum of ten minutes and then rinse clean, or run them through the cage washer.

e) Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and that torn or dirty barrel liners are replaced.

f) Documentation: Runs/room sanitized, vents cleaned, and floor drains cleaned.

C. Monthly:

1. Each feed and litter barrel is to be sanitized and allowed to dry completely before being used again.
   a) Remove feed, liners, labels, and any debris.
b) Run barrel through the cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.

c) Replace with new liner and label, and replace feed.

2. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.5

3. Documentation: Record after sanitizing rooms and feed barrels.

5 See SOP 5.1: Room Sanitation
I. Purpose:
   Describes requirements for rooms housing adult sheep.

II. Scope:
   The following are the duties that must be addressed. Animal caretakers assigned a room housing adult sheep are responsible for completing these duties.

III. Equipment/Supplies:

IV. Procedure:
   A. Daily:
      1. In raised kennel:
         a) Check runs to determine the health status of each animal\(^1\) and if immediate sanitation needs to be completed. This is to be done both AM and PM unless otherwise instructed.
         b) Using a sanitized feeder, feed as directed\(^2\)
         c) Give the sheep fresh water in a sanitized bowl and refill at least twice each day.
         d) Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be noted with abnormalities reported to the supervisor before noon for AM checks and by 3:45PM for PM checks.
         e) Refill any supplies used in room.
         f) Wipe clean all feed barrels lids with a quaternary ammonia cleaner.
         g) Hose down the runs, the floor under the runs, and the corridor. Make sure all feces and other debris is flushed down the drains. Do not get the sheep wet. Replace the drain covers. Squeegee floor if wet.
         h) Documentation: Record temperature, humidity, AM check time, time fed, water filled, floor hosed, runs cleaned, drains cleaned, PM check time, caretakers initials, and census sheet to reflect daily changes. Also, write in the individual animal’s medical record any abnormality noted when determining each animal’s health status.

      2. On bedding:
         a) Check runs/rooms to determine the health status of each animal\(^3\) and if immediate sanitation needs to be completed. This is to be done both AM and PM unless otherwise instructed.

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\(^1\) See SOP 8.3: Animal Health Surveillance
\(^2\) See SOP 5.2: Feed and Bedding
\(^3\) See SOP 8.3: Animal Health Surveillance
b) Using a sanitized feeder, feed as directed.\(^4\)

c) Give the sheep fresh water in a sanitized bowl and refill at least twice each day.

d) Environmental checks, including temperature, humidity, lighting, noise, odors, or maintenance concerns, should be evaluated with abnormalities reported to the supervisor before noon for AM checks and by 3:45 PM for PM checks.

e) Refill any supplies used in room.

f) Wipe clean all feed barrel lids with a quaternary ammonia cleaner.

g) Spot clean soiled areas by removing animal waste and soiled or wet bedding. Add additional bedding to maintain a minimum of 4” depth.

h) Documentation: Record temperature, humidity, AM check time, time fed, water filled, runs cleaned, PM check time, caretakers initials, and census sheet to reflect daily changes. Also, write in the individual animal’s medical record any abnormality noted when determining each animal’s health status.

B. Weekly:

1. In raised kennel:

   a) All runs must be sanitized at least once each week. Runs must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.

      i. Place sheep into a dry, already sanitized run. If none are available, place sheep in a transport cage.

      ii. With a hose pre-wash the run, removing all feces and other debris. Flush this down the drain.

      iii. Using the sprayer mounted in each room hose down the entire run, working from the ceiling to the floor, with a quaternary ammonia (quat) cleaner.

      iv. With an upright scrubber and pad wipe down the entire run, working from the ceiling to the floor.

      v. After 10 minutes of contact time, the run should be rinsed clean of any chemical and allowed to dry.

   b) Air vents will be wiped with a quat cleaner.

   c) The door, door frame, and any stainless steel or windows will be cleaned at a minimum of once each week.

   d) All enrichment toys must be sanitized once each week. After sanitizing, rotate the toys among the adult sheep. Either soak them in a bucket of quat for a minimum of ten minutes and then rinse clean, or run them through the cage washer.

\(^4\) See SOP 5.2: Feed and Bedding
e) Feed barrels must be checked each week to ensure that the labels are correct, the correct type of feed is being used, the feed is within six months of its mill date, and the torn or dirty barrel liners are replaced.

f) Documentation: Runs sanitized, vents cleaned, and floor drains cleaned.

C. Monthly:

1. Each feed barrel is to be sanitized and allowed to dry completely before being used again.
   a) Remove feed, liners, labels and any debris.
   b) Run barrel through the cage washer, or spray with chemical sanitizer; wait required contact time, then rinse and dry.
   c) Replace with new liner and label, and replace feed.

2. All rooms will be sanitized on a monthly basis by an approved method. Animal rooms must also be sanitized when depopulated and possibly before being repopulated if deemed necessary by the supervisor.5

3. Documentation: Record after sanitizing rooms and feed barrels.

5 See SOP 5.2: Room Sanitation
Section 6.0: Population Control
I. Purpose:

Describes how animals are identified by cage cards and the required cage card information.

II. Scope:

The following details the cage card identification process.

III. Equipment/Supplies:

3x5 Cards, printed stickers.

IV. Procedure:

A. Printed stickers for newly received animals should include the following information: investigator’s name, department name, protocol number, phone number, vendor, strain, species, date of arrival, date of birth, sex, and the USDA number if applicable.

B. The printed sticker should be placed in the upper left hand corner. Printed stickers for colony bred.

C. Most printed stickers will have the investigators names, species, vendor’s name typed in; however, some labeled stickers will have spaces for this information to be recorded.

When identifying mice, rats, hamsters, Guinea Pigs, or gerbils one cage card applies to all animals within each cage. Whereas rabbits, cats, dogs, sheep, pigs, and animals all require individual cage card identification.
I. Purpose:
Describes acceptable procedures for identifying laboratory animals.

II. Scope:
The following are practices that should be performed by anyone working with animals in all ULAR approved facilities or laboratories.

III. Equipment/Supplies:
Cage cards (3x5 cards w/ sticker labels), USDA tags. (ear tags, ear punch, ear tagging device, tattooing device, etc).

IV. Procedure:
A. The IACUC handbook requires at a minimum the following requirements.
   1. Rodents:
      a) Cage cards are required.
      b) Cage card must accompany animal at all times.
   2. Dogs and Cats:
      a) USDA number must be present on medal secured to animals collar.
      b) Cage cards must be affixed to animals cage.
      c) Cage card must accompany animal at all times.
B. Cage Cards¹
   1. Cage card identifies ACUP number and documents procedures, medical events, and any applicable observations.
   2. Cage cards can be located in animal rooms or at the CAF main office.
   3. Cage cards can be customized for investigators by the CAF.
C. Other federally approved identification methods:
   1. Collars, bands, plates, and tabs: Collars may be used on most domestic or laboratory animals. They may be made of a variety of products (leather, nylon, plastic). Disposable plastic collars which are inexpensive, adjustable, strong and durable, may be very useful for identification of research animals, discarded at the termination of the study.
   2. Colored stains and dyes: High contrast stains or dyes are useful for marking laboratory animals. It is important that the markings will endure at least for short duration studies.
   3. Ear notches: Ear marking is done by punching holes or notches in the ear flap. It is an acceptable method for identifying laboratory animals. Several different coding systems

¹ See SOP 6.1: Cage Card Requirements
have been developed, where the location and side of the hole or notches are unique to the assigned animal.

4. Ear tags: Ear tags are identification tags of plastic or metal, clipped onto the edge of the ear, or anchored through the ear. Enough space should be allowed for growth. Infection, head shaking or tearing may require removal.

5. Tattoos: Tattooing has been used successfully for many years in permanently identifying animals. ID tattoos are completely acceptable method for laboratory animals, especially in light skinned areas.

6. Subcutaneous transponders/implanted microchips: Coded microchips provide a means of uniquely and permanently identifying an animal. The microchips, which are commonly implanted subcutaneously, carry an identification code that can be read by a scanner held near the animal. This ID method is particularly useful when mistakes in individual animal identity are totally unacceptable, as in toxicological or drug evaluation studies.

7. Freeze brands: Freeze branding is an acceptable method for identifying laboratory animals.

8. Toe-clipping is discouraged and should only be used on altricial neonates.
I. Purpose:

Describes the procedure for sexing mice and rats.

II. Scope:

The following are practices that should be performed by anyone sexing mice in any ULAR facility.

III. Equipment/Supplies:

N/A

IV. Procedure:

A. Restrain the mouse or rat by grasping the base of the tail so that the genitalia are easily seen.

B. Find genital region.

C. Observe anogenital distance\(^1\).

D. Neonates

1. Females will have the following characteristics:
   a) Shorter anogenital distance.
   b) Conspicuous row of nipples after 9 days.

2. Males
   a) A larger anogenital distance, 1.5 to 2 times greater.
   b) Pale testes semi-visible through the abdominal wall.
   c) A larger genital papilla.

E. Adults

1. Adults can be sexed using the same methods described in D.

2. Females are typically smaller with a bilateral row of nipples.

3. Males are typically larger with their testicles frequently dropped in the scrotum.

F. Sexing is most easily done while comparing littermates.

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\(^1\) The distance between the anus and the genital opening.
I. Purpose:
Describes the procedure for aging neonate mice.

II. Scope:
The following are practices that should be performed by anyone aging mice in any ULAR facility.

III. Equipment/Supplies:
N/A

IV. Procedure:
A. Follow the chart below for characteristics used to identify neonate age.
B. Handling of neonate mice should be kept at a minimum.
C. Characteristic Chart:

<table>
<thead>
<tr>
<th>AGE IN DAYS</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Blood red, Possible milk spots</td>
</tr>
<tr>
<td>1</td>
<td>Lighter colored red, milk spots present</td>
</tr>
<tr>
<td>2</td>
<td>Ears appear as nubs, pigment may start to appear in some strains</td>
</tr>
<tr>
<td>3</td>
<td>Ear flap “starting” to come away from head (one or both)</td>
</tr>
<tr>
<td>4</td>
<td>Ears fully developed, completely off head, “some” starting to go toward back, shade of color</td>
</tr>
<tr>
<td>5</td>
<td>Ears all back, skin appears much thicker with more color density to skin</td>
</tr>
<tr>
<td>6</td>
<td>Milk spots disappearing or gone, colored fuzz appears behind ears or on neck</td>
</tr>
<tr>
<td>7</td>
<td>Colored fuzz starting to cover up</td>
</tr>
</tbody>
</table>
Section 7.0: Animal Procurement and Transportation
I. Purpose:

II. Scope:

III. Equipment/Supplies:

IV. Procedure:
   A.
I. Purpose:
   To describe proper procedures for receiving animals that will be housed within the CAF.

II. Scope:
   The following are the proper steps that need to be taken when receiving animals. Anyone
   responsible for receiving animals is expected to follow the SOP.

III. Equipment/Supplies:
   Transfer cart, spray bottle(s) with 10% bleach solution, transfer cage.

IV. Procedure:
   A. Check the log book to familiarize yourself with what each investigator is to receive.
   B. Take either a cart with the spray bottle containing 10% bleach solution or transfer cage (if
      receiving dogs) to the receiving area in back of the Medical Research Building (MRB).
   C. Before accepting any animals, confirm that what you are receiving is the same as to what is
      written in the log book.
   D. If there are any discrepancies, call the CAF Office to receive clearance before accepting the
      animals.
   E. Spray the entire exterior of all rodent and rabbit shipping boxes with the 10% bleach
      solution.
   F. Take the animals directly to the facility in which they will be housed or to the 9th floor for the
      MRB for distribution to their appropriate facility later.
   G. Return any cart or transfer cage to the cage washroom for sanitizing prior to next use.
I. Purpose:
Describes the sterile technique that is to be used for changing cages.

II. Scope:
This cage changing technique is to be used when transferring rodents, housed in microisolators, into sterile cages. All work is to be performed under a laminar flow hood. Anyone who handles or changes a microisolator cage is responsible for following this SOP, including, but not limited to supervisors, animal care technicians, research staff, vet tech, veterinarians, etc.

III. Equipment/Supplies:
Laminar flow hood, autoclaved microisolator tops, cold sterilant (chlorine dioxide), autoclaved microisolator boxes, alcohol, autoclaved wire tops, glass cleaner, autoclaved water bottles, lint-free cloths, irradiated feed, tape, autoclaved cage cardholders, PPE (cover gown, cap, gloves, mask, and shoe covers).

IV. Procedure:
A. Put on a clean gown, shoe covers, cap, mask, and gloves.
B. Tape or tuck sleeves into the gloves to prevent exposure of skin at wrists.
C. Turn on the blower, if off, and let it run for at least 15 minutes.
D. Wipe down the entire work area of the cabinet using chlorine dioxide and a lint-free cloth. Allow for a contact time of at least 5 minutes.
E. Create a sterile field by laying down lint-free cloths and saturating them with the cold sterilant.
F. Saturate another cloth for use in wiping down items brought under the hood, and for gloved hands, each time they are removed from under the hood or come in contact with animals, dirty cages or supplies.
G. Set feed and a few clean water bottles to the back right corner of the work area. Avoid blocking the air flow.
H. Wipe down exterior surfaces of any supplies placed on the sterile field under the hood.
I. Place up to 5 clean mouse cages or 2 clean rat cages to the left on the sterile field.
J. Set one dirty cage with microisolator top intact in the middle on the sterile field.
K. Remove the microisolator top and set it to the right of the box.
L. Wipe gloved hands with cold sterilant cloth and change or move metal lid and cardholder to the clean cage.
M. Transfer rodents using wiped gloves or sterile forceps to the clean cage.
N. Replace metal lid.
O. Change or refill water and feed.

P. Replace microisolator top.

Q. Return cage to shelf or ventilated rack.

R. Remove dirty cage from the work area and repeat these steps for each cage to be changed.

S. When finished transferring rats or mice, remove all supplies from the hood.

T. Wipe down the entire work area with chlorine dioxide, allow for at least 5 minutes contact time, then wipe with alcohol, and finally wipe the window with glass cleaner.

U. Turn off the light, but leave blower running.
I. Purpose:
Describes the procedure for removing animals from the Barrier Rodent Facility.

II. Scope:
The following are practices that should be performed by anyone removing animals, dead or alive, from the BRF.

III. Equipment/Supplies:
Bedded cage(s), wire top(s), filter top(s), tape, animal feed, water bottle(s) with water, cage cover(s).

IV. Procedure:
A. All animal removals should take place before 4:00pm M-F, 2:00pm Sat. (No Sunday or Holiday removals).
   1. Bring the live animal/s to the rear of the facility in bedded caging with wire top/s, animal food, water bottle/s with water in them, and a filter top/s.
   2. Bring dead animals as above except contained in bags supplied for dead animals.
B. Use the cage covers supplied to cover the cage/s (or dead animal/s) completely. If tape is needed there is a tape gun located in the rear also.
C. Push open the back door and place the cage/s down without exiting the facility. If there is no reason for you to return to the facility or the locker room area, then you may exit from this door after all of your PPE is removed and discarded.
D. Individuals not exiting the facility should return to the cart where the PPE’s are supplied and use the spray bottle with quaternary ammonia (Sani PlexTM) in it to spray booties or place a new pair over the existing pair. Re-enter the clean side of the facility, then the locker room.
E. Exit the facility the way you came in.
F. If there is a cart load of animals and cages in need of being removed from BRF, please schedule at least three days in advance with the animal care staff to use the elevator located in the rear of the facility.
Section 8.0: Preventive Medicine
I. Purpose:
   To detect infectious agents in the research animals.

II. Scope:
   All personnel involved with rodent husbandry and veterinary technician or designee.

III. Equipment/Supplies:
   Rodent caging; sentinel cage cards.

IV. Procedure:
   A. Source of animals: research animals, spare animals, transferred animals, specifically purchased animals
   B. Sentinel housing—without ventilated rack:
      1. Mice: 4-5 animals may be housed per cage (no filter top) on the bottom of a rack; at each cage change, animals will be given a soiled cage, “fresh” used water bottle\(^1\), left over food from several other cages, and samples of soiled bedding from 5 different cages.\(^2\)
      2. Rats: 2 animals may be housed per cage on the bottom of a rack, following instructions for mice.
      3. Guinea Pigs: 2 animals will be housed per cage in a soiled cage with a “used” feeder.
   C. Sentinel Housing—with ventilated rack:
      1. Mice: 4-5 animals may be housed per cage (no filter top) on the bottom of the rack; at each cage change, follow above practice in A1.
      2. Rats: 2 animals may be housed per cage (no filter top) on the bottom of the rack, following instructions for mice in A1
   D. Use of Research Animals—when sentinels cannot be placed in a room:
      1. Mice: researchers are consulted to obtain live mice for sampling and euthanasia.
      2. Rats: as with mice, in addition, if there are insufficient animals available, blood may be collected via a peripheral blood vessel, a scotch tape test performed for pinworms, and pelage can be examined for signs of ectoparasites OR schedule sampling with the termination of a study.
      3. Guinea Pigs: as with rats
   E. Sampling: animals should be in the room at least six weeks prior to sampling.
      1. Frequency: see chart for rats and mice; guinea pigs are evaluated only 2 per quarter.

\(^1\) Fill by using water from several different cages.
\(^2\) This amounts to exposure from about 12 cages.
2. Samples: blood for serology, abnormal tissue (5mm slices, unless otherwise specified by veterinarian) collected in formalin for histology, examination of the pelage and cecum/large intestines for pinworms.

F. Cage card information: strain, source (PI bred or vendor), age on entry, date of entry into facility, date begun to be a sentinel, protocol number, indication of what rooms animals exposed to, room assigned as a sentinel, and note specific rack if several racks are in the room.

G. Vendor Screens: annually, all vendors are screened using a minimum of 3 rats and mice and 2 Guinea pigs per vendor site (could be geographical, building, and room). Animals are sampled ideally upon arrival, but this may be postponed up to 3 days (e.g. animals arrive Friday and are sampled Monday of the following week).

Example of Sampling

<table>
<thead>
<tr>
<th>Week</th>
<th>1 Month</th>
<th>1 Month</th>
<th>1 Month</th>
<th>Yearly Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Screen</td>
<td>2 per room</td>
<td>2 per room</td>
<td>2 per room</td>
<td>12 per room</td>
</tr>
<tr>
<td>Select Serology</td>
<td>2 per room</td>
<td>2 per room</td>
<td>2 per room</td>
<td>12 per room</td>
</tr>
</tbody>
</table>
I. Purpose:

To detect infectious agents in the research animals.

II. Scope:

Veterinary technician or designee.

III. Equipment/Supplies:

A. Blood Collection Supplies: clippers, 3cc syringes with 21 (rats) and 22 (mouse) gauge needles, insulin syringes with 29 gauge needles, heparin, heparinized microtubes and 250 microliter heparinized tubes, Decapi-cone, microcentrifuge tubes, pen marker, paper, alcohol and/or chlorhexidine swabs, small empty cage.

B. Serology Supplies: small container with sterile phosphate buffer solution (PBS), pipet-man instrument, yellow tip pipettes, microtubes (may be CRL if using them), mailer box, ice, centrifuge, diagnostic lab form.

C. Gross necropsy and Pinworm Evaluation: disposable scalpel blade with #10 blade, 2 hemostats, scissors, 3 forceps, dry gauze, water/alcohol/ or chlorhexidine soaked swabs, petri dishes, 20 ml syringe with 18 needle, sodium chloride (NaCl), formalin in small sterile urine collection containers, dissecting scope, sterile calgi swabs for bacterial collection, scotch tape and slides, incubator.

IV. Procedure:

A. Source of animals: research animals, spare animals, transferred animals, specifically purchased animals.

B. Sampling: animals should be in the room at least six weeks prior to sampling.

1. Frequency: see chart for rats and mice; guinea pigs are evaluated only 2 per quarter.

2. Samples: blood for serology, abnormal tissue (5 mm slices, unless otherwise specified by veterinarian) collected in formalin for histology, examination of the pelage and cecum/large intestines for pinworms.

3. Serology testing:

   a) Complete Screen

      i. Rat: Sendai, PVM, SDA/RCV, KRV, H-1, GD-7, Reo-3, LCMV, MAD, Hantaan, E. cuniculi, CAR Bacillus, and M. pulmonis

      ii. Mouse: Sendai, PVM, MHV, GD-7, Reo-3, LCMV, MAD, Hantaan, MVM, Ectromelia, K, Polyoma, EDIM, MCMV, E. cuniculi, MTLV, CAR Bacillus and M. pulmonis

      iii. Guinea pig: LCM, PVM, Reo, Sendai, and SV5

   b) b. Select Serology:
i. Rat: Sendai, PVM, SDA/RCV, KRV, H-1, CAR Bacillus, and M. pulmonis
ii. Mouse: Sendai, PVM, MHV, MVM, GD-7, CAR Bacillus and M. pulmonis

C. Blood Collection: blood can be collected via retroorbital bleeds; heart puncture; or as with rats and guinea pigs that may survive, the peripheral blood vessel (using the Decapi-cone for restraining rats). Ideally ~500 microliters of blood is obtained from each animal, but in some cases less per animal will suffice or blood from several animals can be pooled. Blood is collected into a labeled microcentrifuge tube that holds ~1ml.

D. Serology: blood is centrifuged on “full” speed for 15 minutes. Using the pipet-man instrument set at 200 microliters and yellow pipette tips, withdraw serum from spun blood (avoid getting blood and if necessary recentrifuge). Add 800 microliters PBS. If you have less than 200 microliters of serum, set the pipetman to the volume you do have and maintain the 1:4 dilution by withdrawing PBS at four times that volume.

E. Gross Necropsy and Pinworm Evaluation: in animals that will live, place the sticky side of scotch tape against the anal area, pressing hard, and then place on a clean slide with sticky side down. Examine the pelage for any signs of ectoparasites. Nonsurviving animals are killed and the pelage is examined for any signs of ectoparasites. Wet the abdomen with water if just for pinworm collection, but alcohol or chlorhexidine if complete necropsy will be performed that may require sterile collection of tissue. Incise the abdomen examining the tissue, collect any abnormal tissue, and place into a 10% formalin filled jar. Using calgi swaps, bacterial samples may be collected. Remove the cecum and about half the large intestines, placing them into a petri dish with ~10ml of NaCl. This is to be incubated for ~15 minutes at 40 degrees C. Before incubation or after, the tissue is opened and excess feces can be removed using the dissecting scope. Examine the tissue under the scope looking for pinworms. Record findings.

F. Vendor Screens: annually, all vendors are screened using a minimum of 3 rats and mice and 2 Guinea pigs per vendor site (could be geographical, building, and room). Animals are sampled ideally upon arrival, but this may be postponed up to 3 days (e.g. animals arrive Friday and are sampled Monday of the following week).

### Example of Sampling

<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>Yearly Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Screen</td>
<td>2 per room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 per room</td>
<td></td>
<td></td>
<td></td>
<td>12 per room</td>
<td></td>
</tr>
<tr>
<td>Select Serology</td>
<td>2 per room</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 per room</td>
<td></td>
</tr>
</tbody>
</table>
I. Purpose:
Describes required daily health observations of all animals.

II. Scope:
The following animal health checks must be addressed each day especially during A.M. and P.M. checks by animal caretakers. Supervisors and support staff are also responsible for completing these duties.

III. Equipment/Supplies:
Pen, color-coded dots, animal observation notification card (AON), and AON Log Book.

IV. Procedure:
A. During, but not limited to, A.M and P.M checks, every animal caretaker should observe each individual animal for signs of illness, injury, abnormal behavior, or death.
B. Upon finding an animal with any abnormality, an “AON” card should be immediately filled out with all the appropriate information and placed upright behind the existing cage card.
C. The soft copy of the “AON” card will be given to the supervisor or placed in a designated area for “AON” forms.
D. Observation of any life-threatening problem should be immediately reported to ensure appropriate and timely delivery of veterinary medical attention.
E. For each “AON” card generated, the information should be entered into the “AON” Log Book by the supervisor or the designated caretaker after completion of A.M and P.M checks.
F. The supervisor will then inform the veterinary staff and the researcher.
G. Upon examination by the veterinary staff, color-coded dots will be placed on every “AON” card found with appropriate instructions to be taken.

<table>
<thead>
<tr>
<th>RED DOT</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>YELLOW DOT</td>
<td>CONTINUE OBSERVATION</td>
</tr>
<tr>
<td>BLUE DOT</td>
<td>ACTION REQUIRED</td>
</tr>
</tbody>
</table>

H. Once the health problem is resolved, the “AON” card will be removed and the date resolved will be entered into the “AON” Log Book by the supervisor.

I. Signs:
1. Cats, dogs, and pigs: discharges (e.g. nose, ears, eyes); diarrhea/vomit; lethargy; not eating/drinking; lameness; and scratching/hair loss.
2. Rodents and Rabbits: discharges (e.g. nose, ears, eyes); lethargy; not eating/drinking; scratching/ hair loss; lameness.
3. Sheep: hanging head; diarrhea; not getting up/lameness; not eating/drinking; discharges (e.g. vagina, nose, ears, eyes).
I. Purpose:

Describes the use of the “fecal needed” card and fecal collection of non-rodents.

II. Scope:

Animal Caretakers during A.M and P.M. health checks will collect feces when a “fecal needed” card is present or abnormal feces is seen. Supervisors, Veterinary Technician, researchers, or support staff may also submit fecals or place the “fecal needed” card on the cage.

III. Equipment/Supplies:

IV. Procedure:

A. As part of the A.M. and P.M health checks, every animal caretaker should observe every non-rodent cage for abnormal feces and/or cage card holder for a “fecal needed” card.

B. Upon finding the abnormal feces and/or cage card holder for a “fecal needed” card present, the appropriate action should be immediately taken.

1. Collect the feces in the fecal container.

   Lift cap, remove green insert, push small end of green insert into feces (if feces are loose, scoop into the small end of the green insert), replace green insert, and close cap.

2. Remove “fecal needed” card from cage card holder and place in the procedure box.

3. Bring fecal container to room 921 C and place in the small refrigerator.

4. Notify Veterinary Technician.

C. If a request for a fecal sample is needed, the Veterinary Technician or the researcher will place the “fecal needed” card in the cage card holder.

D. If any abnormal feces are present such as blood, mucous, foreign material, etc., contact the Veterinarian, Veterinary Technician, or the Supervisor immediately before cleaning cage or room.
I. Purpose:

Describes the requirements for newly arrived non-rodent animals.

II. Scope:

The following are the duties that must be addressed each time a new non-rodent animal arrives. The Veterinary Technician, Veterinarian, or designee is responsible for completing these duties.

III. Equipment/Supplies:

Pen, chart sheet with health sticker, stethoscope, thermometer, gauze, alcohol pads, blood tubes (red & purple top), syringes with needles/ vacutainers, chlorhexidine scrub & solution, and fecal container.

IV. Procedure:

A. Upon the arrival of a new animal, a physical examination (PE) including temperature (T), heart rate (HR), respiratory rate (RR), and weight will be completed.

B. Every animal, except those that are here ten days or less, will have a complete blood count and a blood chemistry performed approximately five working days after arrival.

C. A fecal collection and examination will also be completed to ensure no intestinal worms are present.

D. Upon completion of the laboratory tests, the results will be placed in the animal’s file with any abnormal results written on the chart sheet.

E. The researcher is contacted by the Veterinary Technician or Veterinarian regarding abnormal laboratory results.
I. Purpose:

Describes the monthly and yearly health maintenance requirements for non-rodent animals.

II. Scope:

The following are the duties that must be addressed monthly and yearly for non-rodent animals. The Veterinary Technician and the Veterinarian are responsible for completing these duties.

III. Equipment/Supplies:

Pen, chart sheet, stethoscope, thermometer, gauze, alcohol pads, blood tubes (red & purple tops), syringes with needles/ vacutainers, chlorhexidine scrub & solution, nail clippers and vaccines.

IV. Procedure:

A. Monthly

1. The first week of every month, all non-rodent animals will be weighed and will have a nail/ hoof trim.

2. A brief examination will be performed at this time.

B. Yearly

1. Annual vaccinations will be given on the anniversary of their previous immunization schedule.

2. At this time, a full physical examination will be done as well as CBC & CHEM screen performed.
I. Purpose:
Describes the requirement for newly arrived rodent animals.

II. Scope:
The following are the duties that must be addressed each time a new rodent animal arrives.
Animal caretakers, supervisors, or designee are responsible for completing these duties.

III. Equipment/Supplies:
Pen, Animal Observation Notification (AON) card, and Animal Procurement Request (APR) form.

IV. Procedure:
A. Upon housing the newly arrived rodent, a physical observation will be performed to ensure receipt of a healthy animal.
B. During observation, the animal caretaker should record on the APR any animal found injured, dead, exhibiting abnormal behavior or signs of illness including, but not limited to, discharge, lethargy, hair loss or lameness.
C. Complete an AON card and notify supervisors and veterinary staff of the observation.
D. The researcher is contacted by the supervisor or veterinary staff regarding the observation of “sick” animals.
E. The vendor will be contacted by the Administrative Director or designee to inform the company of the problem.
Section 9.0: Surgery
Section 10.0: Pain, Anesthesia and Analgesia
Section 11.0: Euthanasia
I. Purpose:
Describes the procedure for disposing of small animal carcasses, including rodents, guinea pigs, rabbits and cats.

II. Scope:
The following are practices that should be performed by anyone disposing of small carcasses, including researchers.

III. Equipment/Supplies:
Animal carcass, pen, plastic bag, refrigerator/freezer, tags with strings, telephone.

IV. Procedure:
A. Animals either found dead or euthanatized should be placed in the plastic bags supplied for animal carcasses.
B. Label a tag with the following information: investigator’s name, phone number, protocol number, species, the date the animal was either found dead or euthanatized, and your initials.
C. Tie the tag strings around the plastic bag with the carcasses in it.
D. If you have been informed of the investigator’s request to manipulate the carcasses, place the plastic bag containing the carcasses in the refrigerator labeled animal carcasses (not a freezer).
   With this type of request you must contact the investigator immediately. Timing is critical.
E. If no request has been made, put the labeled plastic bag in the refrigerator labeled animal carcasses.
F. Plastic bags and tags are located in following areas of these facilities
   1. BRF: In the bin next to euthanasia chamber, and in both hallway cabinets.
   2. PAH: In a drawer in the procedure room and in a drawer where the euthanasia area is.
   3. MRB: In drawer in Necropsy room
   4. OMS: In drawer in Necropsy room and next to utility sink in dirty side Hallway.
I. Purpose:
   Describes procedure for using Carbon Dioxide as a means of euthanasia.

II. Scope:
   This method of euthanasia is recommended for only small animals (weighing under 300 grams).
   The method described should be used for small rodents.

III. Equipment/Supplies:

IV. Procedure¹:
   A. Use an empty polycarbonate box appropriate for the species. This means mouse-size for mice, and rat-size for rats, etc.
   B. Prior to placing animals in the box, place a wet sponge in one of the corners of the box.
   C. Total animal weight cannot exceed 300 grams. This means no more than one adult rat or 5 mice at one time.
   D. Prior to placing animals in the box, place the Plexiglass lid with the CO₂ hose attachment on the box; charge the chamber with gas for 1-2 minutes with the lid closed.
   E. Place animals in the box. Turn gas on low so as not to frighten the animals.
   F. CO₂ should be administered until death. At this point, heartbeat and respiration should be checked to verify death.
   G. Dead animals are then bagged, tagged with the investigator’s name and protocol number, and disposed of properly.

¹ This procedure is based on the 1993 AMVA Panel report on Euthanasia. Generally, only rodents are euthanized in this manner: Large rats, rabbits or guinea pigs are euthanized on an individual basis, with injectible euthanasia solution.
Section 12.0: Physical Plant