Laboratory and Satellite Rodent Housing

Policy: Although strongly discouraged, the IACUC acknowledges that there are circumstances when holding animals in laboratories for long periods of time, defined as longer than 12 hours for the purposes of this policy, is warranted. Such housing of rodents in non-RRF areas must be specifically justified and approved in an IACUC Proposal. If laboratory or satellite housing for greater than 3 days is associated with procedures described in a Core Laboratory Animal Proposal, then a Satellite Housing Area Description (SHAD) should be attached to the specific Core Proposal; other Proposals utilizing Core resources should reference the Core Proposal only. Husbandry and animal care must follow the principles outlined in the Guide. Rodents held in non-RRF space must be observed and monitored at least once daily. The expectations for the room maintenance, environmental monitoring, and record keeping will correspond to the time period animals are kept in the laboratory: a) between 12-24 hours (“overnight housing”), b) up to 3 days (“temporary satellite housing”), or c) greater than 3 days (“satellite housing”). Such records must be retained for review by IACUC and Research Resources Facilities (RRF) staff. Access to RRF veterinary staff must be made available at all times. RRF per diem fees will be charged for animals held within non-RRF locations greater than 24 hours.

Note: Although use of any laboratory or area must be approved by the IACUC, this policy does not pertain to prolonged procedures requiring anesthesia (lengthy non-survival procedures), i.e., it only applies to holding of conscious animals in laboratories.

Rationale: PHS Policy and USDA AWAR define a satellite facility as “any containment outside of a core facility or centrally designated or managed area in which animals are housed for more than 24 hours.” The 8th Edition of the Guide confirms that animals “should be housed in facilities dedicated to or assigned for that purpose, not in laboratories merely for convenience. If animals must be maintained in a laboratory to satisfy the scientific aims of a protocol, that space should be appropriate to house and care for the animals and its use limited to the period during which it is required. If needed, measures should be taken to minimize occupational hazards related to exposure to animals…” This policy/procedure outlines the minimum IACUC expectations for daily and other routine care and outlines mechanisms for providing information required by regulatory and accrediting agencies.

Procedures, Guidelines, and Exceptions:
1. The IACUC approves housing of rodents in laboratories or satellite facilities on a case-by-case basis based on the procedures to be performed. The following information is required of all Proposals requesting laboratory or satellite housing, even those utilizing a Core Proposal. A justification for keeping rodents within a non-RRF space longer than 12 hours must be detailed in the “Study Site(s)” section of the Proposal. In addition, this section should state the building and room number to be used, proposed length of time animal will remain in the room(s), a description of any special caging or primary enclosures used, an approximate number of animals to be housed at any given time, and any additional special needs of the animals. In the Project Participants section, the laboratory personnel responsible for animal observations should be identified. Keeping of animals in
laboratories or satellite facilities for reasons other than those procedures approved by the IACUC is prohibited.

2. In accordance with the Guide and Animal Welfare Act Regulations, each laboratory holding vertebrate animals outside of RRF-controlled space must provide the Attending Veterinarian, or his/her designate, with access to the animals.

3. Rooms holding rodents for **over 12 but less than 24 hours** are considered “**Overnight Housing Locations.**”
   a. Procedures outlined in item 1 and 2 of this section must be followed.
   b. Transport of animals must be in accordance with IACUC Policy/Procedure, “Transporting Animals to Research Laboratories.” Transport must occur in a clean cage with adequate food, water, bedding, and environmental enrichment (unless exemptions were approved in the IACUC Proposal). RRF-produced cage cards must remain with the cages. Upon completion of transport, water level in bottles should be checked for leakage.
   c. Animal should remain in their cage with the filter top attached as much as possible and returned to an RRF animal holding room as soon as possible. Cages must not be stacked.
   d. The names and contact numbers (including emergency contact numbers) for individuals responsible for animal observations in the area must be posted. *Note that RRF veterinary care staff must be notified immediately of veterinary medical issues (abnormalities including illness, abnormal behavior, or mortality).*
   e. Adequate space in the room should be dedicated to animal holding for the time period during which cages remain in the room. This space must be physically separated from chemicals or other hazards. An empty fume hood, biological safety cabinet, or other space that provides containment of dust and allergens is preferred.
   f. Any safety procedures outlined in laboratory-specific SOPs or in approved Special Animal Safety Protocols (SASPs) must be followed.
   g. Security measures must be in accordance with IACUC Policy/Procedure, “Animal Security in Investigator Laboratories.”

4. Rooms holding rodents for **over 24 but less than 3 days** are considered “**Temporary Satellite Housing Locations.**”
   a. Procedures outlined in item 1, 2 and 3 of this section must be followed.
   b. Light cycles should be controlled and correspond to the same on-and-off cycle as the vivarium of origin.
   d. The date the cage entered the room and the date the cage was returned or the animals were euthanatized must be noted on a cage card. If all cage occupants are euthanatized, these cage cards must be retained for at least 3 years and made available to the IACUC and RRF for review.
   e. Any clean cages needed should be obtained from the RRF as “kits” (cage fitted with bedding, lid, microisolator top, food, and water) and transported to the location within a plastic bag. Movement of animals from the transfer cage should be minimized, but if necessary (excess soiling, water spillage, dividing groups, *etc.*), animals should be placed into complete clean cage kit. Soiled cages should be bagged carefully to avoid exposure to aerosolized bedding and returned within 3 days to the facility of origin. Bedding must not be removed from caging within the laboratory.
   f. The following information must be documented **daily** when animals are kept in the room. The use of a standardized log form is recommended.
      1) Animal census (for mice by cage, for rats by animal) by Proposal number.
2) Maximum and minimum temperature reached the previous 24-hours, taken from the area of animal cage holding.
3) Verification that feed, water, and an assessment of animal health was checked.
4) Any animal abnormalities noted, including illness, abnormal behavior, or mortality. Note that RRF veterinary care staff must be notified immediately of such issues.
5) These records must be retained for at least 3 years and be made available to the IACUC and RRF for review.

5. Rooms holding animals for greater than 3 days are considered “Satellite Housing Areas.”
   a. Procedures outlined in items 1, 2, 3, and 4a-e of this section must be followed.
   b. A Satellite Housing Area Description (SHAD) must be maintained and submitted for IACUC and RRF review and approval. The SHAD should be updated and revised as often as necessary but at least every three years, and should contain the following information. A copy of the most recent SHAD must remain in the area. An addendum to the SHAD must list all pertinent IACUC-approved Proposals. If laboratory or satellite housing is associated with procedures described in a Core Laboratory Animal Proposal, then a SHAD should be attached to the specific Core Proposal as an “Other Study Document” in iRIS. Other Proposals utilizing Core resources should reference the Core Proposal SHAD only.
   1) Facility(ies) Description
      a) For each Satellite Housing Area, the names and contact numbers (including emergency contact numbers) for individuals responsible for animal care must be included.
      b) The building and room number for each animal housing area should be listed. Estimates for both the area (square footage) used for animal housing and the area (square footage) available for animal support and use should be included.
      c) For each room, the SHAD should describe the finishes/materials used, including floors, walls, doors, and ceilings. Surfaces should be maintained to enhance sanitation practices.
      d) Note if emergency power is provided and if so, what electrical services and equipment are maintained in the event the primary power source fails. This section should include an emergency response plan addressing major system failures.
      e) A description of the lighting system(s) for the animal housing rooms should include estimated light intensity, spectrum, photoperiod (light:dark), construction features (e.g., water resistance), and control (e.g., automatic versus manual, phasing). For systems automatically controlling photoperiod, override mechanisms should be described. Exterior and interior windows should be opaque or red-filtered.
      f) The SHAD should address safety features of the areas, including electrical hazard safety and physical hazards.
      g) Security measures used in the areas should be described.
      h) Any pest control program affecting the housing room(s) should be described.
      i) A description of the HVAC system supporting the area should be included. The SHAD should include as an attachment AAALAC’s HVAC System Summary Form (see attached).
         i. If air is not 100% fresh/exhausted, the AAALAC FAQ regarding use of recycled air should be considered.
         ii. If static microisolator cages are used, room air exchange rate should exceed 10 air changes per hour. If individually-ventilated cage systems are used, air exchange rate should be adequate to support temperature and relative humidity in Guide-recommended ranges and prevent odor escape into surrounding areas.
iii. Room relative pressure should be maintained negative with respect to the surrounding areas for odor and allergen control.

iv. Room (or cage) temperature and relative humidity should be maintained within Guide-recommended ranges (+/-2°F with a set-point between 70-72°F, relative humidity 30-70%).

v. The room should be equipped with a means of monitoring temperature and notifying personnel in the event that critically high or low temperature (+/-7°F from set-point).

vi. HVAC equipment performance should be evaluated at least annually.

2) Primary Enclosures
   a) The SHAD should provide a general description of each primary enclosure used. If primary enclosures are not provided by the RRF, this description should include the number of such enclosures, species housed, composition/construction materials, dimensions, and maximum number of animals per enclosure (housing density). For the latter, a description of the performance criteria used to determine the appropriateness of space should be provided if the density is greater than RRF standards.
   b) The SHAD should include a justification for any individually-housed animals and a description of any elements used within the primary enclosure to enhance animal well-being (e.g., environmental enrichment).

   c. Cage-changing should be arranged with and provided by the RRF. Alternatively, the SHAD must contain a description of husbandry and animal care procedures.
      1) The SHAD should confirm and provide a description of ensuring daily observation, including weekend and holiday care, as well as procedures for contacting animal care and/or veterinary personnel in case of an emergency.
      2) The SHAD should describe the frequency of cage changing. Clean cages must be obtained from the RRF as complete “kits.” Unless a special, IACUC-approved diet is employed, storage of feed and bedding is not allowed.
      3) The SHAD should contain a description of the source, treatment, and method of providing drinking water.
      4) Methods of monitoring animals for infectious agents or other illnesses, including criteria used to indicate a need for veterinary staff assistance, must be included.

   d. The following information must be documented daily when animals are kept in the room. The use of a standardized log form is recommended.
      1) Animal census (for mice by cage, for rats by animal) by Proposal number.
      2) Maximum and minimum temperature and relative humidity reached the previous 24-hours, taken from the area of animal cage holding.
      3) Verification of checking feed, water, and an assessment of animal health.
      4) Any animal abnormalities noted, including illness, abnormal behavior, or mortality. Note that RRF veterinary care staff must be notified immediately of such issues.
      5) These records must be retained for at least 3 years and be made available to the IACUC and RRF for review.

References:
4. AAALAC Frequently Asked Questions, “Recycled air”
   (http://www.aaalac.org/accreditation/faq_landing.cfm#E6).

**Attachment**: AAALAC Program Description Template, HVAC System Summary.