The University of Pennsylvania Institutional Animal Care and Use Committee (IACUC) has developed the following policy to provide guidance to PIs regarding the satellite housing application process, and for the IACUC to use as a tool to review these applications in a consistent manner.

“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.” (Guide 2011)

The Animal Welfare Act Regulations defines study area (“satellite”) as “any building room, area, enclosure, or other containment outside of a [main] facility or centrally designated or managed area in which animals are housed for more than 12 hours.” (AWAR § 1.1 Definitions)

Specific questions regarding housing should be referred to University Laboratory Animal Resources (ULAR) and questions regarding general animal use practices should be referred to the Office of Animal Welfare (OAW).

A satellite facility is a room or area where animals are kept for more than 12 hours and where ULAR does not perform daily observations, regardless of the room’s inclusion in, or proximity to, the vivarium. IACUC-approved satellite housing may be necessary if (1) main facilities or centrally managed facilities are unable to provide appropriate housing conditions for the research or (2) the research conducted precludes daily observations being performed by ULAR.

Prior to housing animals in a satellite facility, the IACUC must review the justification of the need for satellite housing and inspect and approve that specific site. All satellite facilities must meet the requirements of the Animal Welfare Regulations and PHS Policy as well as the standards of the Guide for the Care and Use of Laboratory Animals (Guide)—see “Basic Requirements” in the “Animal Facilities” policy.

This policy will cover the following topics:
- General management requirements of satellite facilities
- Considerations prior to applying for satellite housing
- Review process
- Site inspection
- Animal care and use requirements of satellite facilities
- Approval
- SHEPHERD daily log
- Post-approval monitoring

**GENERAL MANAGEMENT REQUIREMENTS OF SATELLITE FACILITIES**
IACUC POLICY – SATELLITE HOUSING

In addition to the basic requirements listed above, satellite facilities have the following additional requirements:

- The satellite facility must be overseen by a scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied ([AWR 2.31(d)[vi]]). One PI must be designated the “responsible party” for the entire room or area and this individual is the main contact for facility-related issues.
- For shared-areas, the PI of the protocols to which the animals are assigned is responsible for husbandry- and compliance-related issues.
- Reporting “sick animals” must comply with ULAR SOP 4.00 “Animal Health Observation Procedures”
- These rooms or areas must have appropriate management procedures in place, in lieu of daily husbandry management by ULAR (e.g. SOPs). All satellite facilities must either (1) follow ULAR’s SOPs, as written, or (2) maintain a library of SOPs to describe the area’s husbandry practices. These SOPs must be filed with the OAW.

CONSIDERATIONS PRIOR TO APPLYING FOR SATELLITE HOUSING

In addition to the general requirements listed above, satellite facilities have the following additional requirements or considerations:

1. Satellite housing should only be requested when there is no other alternative to housing the animals outside of a ULAR-managed facility. Every reasonable effort should be made to manage logistical issues within ULAR-managed facilities.
   - If a particular procedure can be performed within a main animal facility or centrally managed area, then it should be performed there.
   - If a particular housing set-up can be maintained within a main animal facility or centrally managed area, then it should be maintained there.
   - The IACUC will consider whether a “core” or other area already exists where the proposed procedure or specialized housing requirement could be performed.

2. The PI proposing satellite housing must document consultation with the ULAR Associate Director for Vivarial Facilities and Planning prior to submitting a satellite housing application. Discussion with the ULAR Associate director will determine whether or not a main animal facility can support the proposed procedures or whether “special requirements” within the main animal facility can be arranged. A memo or email thread clearly illustrating why ULAR cannot accommodate the stated needs of the housing should be uploaded into the ARIES satellite housing application.

3. Scientific justification must be clear and present for the satellite housing request before applying. Specific literature to support the scientific justification may be required.

4. POLARIS should be used to order animals in the satellite facility. POLARIS cage cards should remain active and displayed on the cages or at an adjacent, clearly visible location in the satellite housing area. In the absence of POLARIS cards, the cages should be clearly labeled with the PI and contact name, phone number, IACUC protocol and cage card number (if cage card number is unavailable, the associated grant should be easily identified).
5. Satellite housing areas must be maintained as a main animal facility would be maintained. This includes, at a minimum, the items noted in the “Basic Requirements” section of the “Animal Facilities” policy. Any deficiencies must be addressed by the PI, Department, or School prior to approval. An approved satellite facility must continue to meet these criteria. Reasonable emergency and contingency plans must be developed in the event of unexpected circumstances that jeopardize animal welfare (e.g. failure of HVAC system to maintain appropriate environmental conditions). Failure to meet these criteria may result in permission of the PI to use the site being revoked.

REVIEW PROCESS

Satellite housing requires submission of an ARIES satellite housing application by the PI and review and approval by the IACUC prior to housing animals in such a location and/or under the described daily health assessment schedule. Animals may not be housed in the satellite housing area until written approval is granted by the IACUC. A site/area is approved only for use for the specific procedures and protocols that are linked to the housing application.

The review of a request to renew or create a new satellite area is performed separately from the review of the protocol or amendment to which it is linked. The two documents are reviewed separately, so that review of the satellite housing request does not delay approval of the protocol or amendment. Housing Requests are routinely reviewed by the Satellite Housing subcommittee of the IACUC, but may be reviewed by the full committee at regularly scheduled monthly IACUC meetings.

Scientific justification must be presented in the satellite housing request and the request must coincide with procedures described in the corresponding IACUC protocol. Literature to support the scientific justification may be required. “Animals should be housed in facilities ..., not in laboratories merely for convenience” (Guide 2011). Examples of justifications that are generally not approved:

- **Post-operative monitoring.** Once an animal has recovered from anesthesia (awake, resting sternally, and moving) it should be returned to an appropriate animal facility where it can continue to be monitored periodically by the lab and is able to be more easily seen by ULAR husbandry and veterinary staff.
- **Distance from the facility.** Proper methods and acclimation periods can reduce the effects of transportation stress.
- **Quarantine.** Removing animals from quarantined facilities could cause the satellite facility to harbor disease and could lead to unwanted infections of the animal colony.
- **Insufficient colony space.** Schools work with ULAR to determine each PI’s housing space in main facilities. Please contact representatives from these groups in order to request additional space.
- **Special equipment.** Consideration must be given to storing special equipment within procedure space of animal facilities; many facilities have limited storage. Contact ULAR to discuss equipment storage in vivaria. If equipment can be transported to or stored within the facility, then it should be, instead of housing animal in laboratories.

SITE INSPECTION

Upon submission of a satellite housing request, and during the review process, the OAW will determine whether a site inspection is needed and will schedule a visit by the IACUC’s Satellite Housing
IACUC POLICY – SATELLITE HOUSING

subcommittee. If the site has not been visited within the past semiannual period, the IACUC will conduct an inspection of the proposed satellite facility. At this time, members of the subcommittee of the IACUC will meet with the PI to assure that the area can meet the basic requirements of any animal facility and to evaluate how the animals will be housed and provided care. Required documentation should be available for review upon request (e.g. HVAC validation, SOPs, etc.). The Schools’ facilities or operations offices should be able to assist in validating ventilation, availability of emergency power supply, light control, temperature/humidity control, and other facilities-related requirements.

ANIMAL CARE AND USE REQUIREMENTS OF SATELLITE FACILITIES

In addition to the basic requirements listed in the “Animal Facilities” policy, satellite facilities have the following additional requirements.

- Social species should be housed in compatible pairs or groups, as per the “Social Housing” policy.
- Animals should be provided with appropriate environmental enrichment consistent with practices of the home facility, unless an exemption is approved by the IACUC.
  - This can include Nestlets, toys, food treats, etc.
  - Exemptions must be approved in advance, prior to initiating any changes to the enrichment plan. Exemption requests may be submitted in ARIES.
- Satellite facilities are expected to have environmental monitoring and alarming systems installed in the housing areas (e.g., Aegis Wireless monitoring). Such systems should monitor temperature and humidity and provide live alerts to satellite personnel through email, phone, or text message.
- The housing area must be segregated from all other laboratory activities—“Animals should be housed in facilities dedicated to or assigned for that purpose...” (Guide 2011). Housing in lab space should be in an isolated area that has very limited use for other purposes.
  - Surgery, euthanasia, and potentially painful procedures may not be conducted in close proximity to animal housing areas, if animals are present.
  - Vapor or fume generating chemicals may not be used or stored in proximity to the animals, e.g. in the same fume hood that the animals may be housed.
  - Housing should not be located adjacent to anyone’s workstation.
- Cages must never be stacked on top of one another, as this impedes proper ventilation to the animals in the lower cages.
- Breeding may not occur in satellite facilities unless specifically described and approved in the housing request.
- It is recommended that food not be stored in the satellite facility as this can attract pests and vermin. If small amounts of food must be kept in the housing space, the food must be sealed in plastic containers to avoid contamination by pests. Feed must also be labeled with a manufactured date and/or expiration date. Unless an expiration date is provided by the manufacturer on the primary container, food is considered expired six months after being manufactured. Some diets may require refrigeration.

APPROVAL

Animals may not be housed in the satellite housing space until the written documentation of approval is received for the specific housing request. Approval for satellite housing is contingent upon a verifiable scientific justification for the housing request, appropriate infrastructure and SOPs, and a favorable site
IACUC POLICY – SATELLITE HOUSING

inspection. If the subcommittee and the PI cannot agree on where and how to house the animals (e.g. satellite vs. main facility) or how the animals will be managed (lab staff or ULAR), the review may be referred to the full Committee for discussion in regularly scheduled monthly IACUC meetings. The full Committee may decide to approve the site, may require additional modifications to the application, or may disapprove the satellite housing application. The PI will be notified promptly of any decision in writing.

IACUC approval for a satellite housing facility is granted to house animals in a specific location and to perform IACUC-approved procedures in that specific location—it does not include any exception to the requirements regarding oversight by the AV/ULAR or the IACUC/OAW.

- ULAR will provide health assessments at least twice per week.
- The IACUC will inspect the area at least semiannually.
- OAW compliance staff will conduct post-approval monitoring as necessary.

Approval of a satellite housing location will be considered for up to 3 years. Prior to the 3-year termination, a new application must be submitted, reviewed, and approved for the site to continue functioning as a satellite housing location. Permission for satellite housing may be revoked if the area, or management of the area, becomes unsuitable for continued housing of animals. Reasons for revoking permission may include, but are not limited to: changes in regulations or federal guidance, lack of compliance by research staff, deteriorating or poorly maintained facilities, or the determination by the IACUC that the justification is no longer valid.

SHEPHERD DAILY LOG

Routine husbandry procedures, environmental monitoring, and animal health observations must be documented daily via the SHEPHERD (Satellite Housing Electronic Program for Husbandry, Environment and Reporting Documentation) online husbandry log. Access to SHEPHERD will be granted upon approval of the ARIES housing request.

SHEPHERD training is available via KnowledgeLink. Please search the catalog for “SHEPHERD Orientation.”

POST-APPROVAL MONITORING

Post-approval monitoring helps assure that animal care and welfare standards are maintained in all areas, including satellite housing. The satellite housing site will be inspected by the IACUC at least once every six months. The OAW compliance staff may visit satellite facilities and run SHEPHERD log reports on a routine basis. Additionally, ULAR will conduct health assessments at least twice per week in all satellite housing areas.

Incidents of non-compliance with this policy, including chronic failure to complete the SHEPHERD daily log, will be assessed by the IACUC compliance subcommittee. If chronic or serious non-compliance incidents are noted by the IACUC, satellite housing approval may be revoked.