BETHYL LABORATORIES, INC.
A3991-01

Animal Welfare Assurance for Domestic Institutions

I, John M. Carwile, M.D. as named Institutional Official for animal care and use at Bethyl Laboratories, Inc., provide assurance that this Institution will comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy).

I. Applicability of Assurance

This Assurance applies whenever this Institution conducts the following activities: all research, research training, experimentation, biological testing, and related activities involving live vertebrate animals supported by the PHS, DHHS, and/or NSF (if applicable). This Assurance covers only those facilities and components listed below.

A. The following are branches and components over which this Institution has legal authority, included are those that operate under a different name:
Bethyl Laboratories, Inc., 20543 West FM 1097, Montgomery, TX 77356

II. Institutional Commitment

A. This Institution will comply with all applicable provisions of the Animal Welfare Act and other Federal statutes and regulations relating to animals.

B. This Institution is guided by the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training."

C. This Institution acknowledges and accepts responsibility for the care and use of animals involved in activities covered by this Assurance. As partial fulfillment of this responsibility, this Institution will ensure that all individuals involved in the care and use of laboratory animals understand their individual and collective responsibilities for compliance with this Assurance, and other applicable laws and regulations pertaining to animal care and use.

D. This Institution has established and will maintain a program for activities involving animals according to the *Guide for the Care and Use of Laboratory Animals* (*Guide*).

E. This Institution agrees to ensure that all performance sites engaged in activities involving live vertebrate animals under consortium (subaward) or subcontract agreements have an Animal Welfare Assurance and that the activities have Institutional Animal Care and Use Committee (IACUC) approval.

III. Institutional Program for Animal Care and Use

A. The lines of authority and responsibility for administering the program and ensuring compliance with the PHS Policy are as follows:

Chief Executive Officer
Institutional Official
John M. Carwile, M.D.

I.A.C.U.C.	Attending Veterinarians

Debra Garrett, Chairman	Henry F. Carwile, D.V.M., TAMU
Henry F. Carwile, D.V.M.	Stacy Carwile, D.V.M., TAMU
Stacy Carwile, D.V.M.	
(b) (6)	

Animal Care Personnel

Managers	**Rabbit Care Associates**	**Large Animal Care Associates**
Henry F. Carwile, D.V.M., Attending Veterinarian	(b) (6)	
Stacy Carwile, D.V.M., Attending Veterinarian		
(b) (6)		

B. The qualifications, authority, and percent of time contributed by the veterinarian(s) who will participate in the program are as follows:

1) Name: Henry F. Carwile,

Qualifications

- Degrees:
  B.S., D.V.M., Texas A&M University M.S. University of Florida, M.S. Hygeine Tulane University
- Training or experience in laboratory animal medicine or in the use of the species at the institution:
  Completed two year Residency in Laboratory Animal Medicine at Tulane University School of Medicine, September 1970 – August 1972. Full time employee at Bethyl Laboratories Inc. for 48 years

2) Name: Stacy Carwile,

Qualifications

- Degrees:
  B.S., D.V.M. Texas A&M University
- Training or experience in laboratory animal medicine or in the use of the species at the institution:
  16 years of on the job training under the direction of Henry F. Carwile, D.V.M. Full time employee of Bethyl Laboratories, Inc.

Authority: Henry F. Carwile, D.V.M., has direct and absolute authority to insure the implementation of all PHS and USDA requirements and recommendations including those in the Guide and has access to all animals at all times. Henry F. Carwile, D.V.M. is directly responsible for the establishment and daily supervision of all animal use and care programs including access to all animals. These responsibilities include housing, feeding, veterinary care, immunizations, blood collections and supervision and training of all animal care personnel. These responsibilities occur daily which includes weekends and holidays. Stacy Carwile, D.V.M. works under the direction of Henry F. Carwile, D.V.M. Dr. Henry Carwile shall devote the majority of his work related time involved in animal care activities. Dr. Stacy Carwile will serve as back-up to Henry and will devote all necessary efforts to provide comprehensive veterinary coverage for all research animals.

C. The IACUC at this Institution is properly appointed according to PHS Policy IV.A.3.a. and is qualified through the experience and expertise of its members to oversee the Institution's animal care and use program and facilities. The IACUC consists of at least 6 members, and its membership meets the composition requirements of PHS Policy IV.A.3.b. Attached is a list of the chairperson and members of the IACUC and their names, degrees, profession, titles or specialties, and institutional affiliations.

D. The IACUC will:

1) Review at least once every 6 months the Institution's program for humane care and use of animals, using the *Guide* as a basis for evaluation. The IACUC procedures for conducting semiannual program reviews are as follows:

a) Each member of the IACUC is notified in advance of the meeting date.
b) The IACUC meeting agenda is published and a copy given to each member.
c) Any minor or major deficiencies noted is documented and included in the minutes of the IAUC meeting. A copy of these minutes is submitted to the Institutional Official within 48 hours.
d) The IACUC discussion of research (manufacturing) protocol(s) using laboratory animals: Bethyl Laboratories, Inc., uses laboratory animals for the production of polyclonal antisera (antibodies) and subsequent recombinant monoclonal antibodies. Bethyl Laboratories, Inc. has one Animal Care and Use Protocol Proposal for consideration by the IACUC. This protocol covers polyclonal antisera production (in rabbits, goats, sheep & donkeys) and recombinant monoclonal antibodies (in rabbits) from PMBCs. The proposal is discussed at each IACUC meeting with the emphasis on refinement, reduction and replacement of animal use. Following discussion the protocol is approved, approved as amended or rejected. All minority views of the IACUC are documented in the minutes of the meeting and submitted to the Institutional Official within 48 hours.
e) Using the Semiannual Program Review Checklists, the IACUC reviews the following: IACUC membership and Functions, IACUC Records and Reporting Requirements, Veterinary Care, Personnel Qualifications and Training, Preventative Medicine/Animal Procurement and Transportation, Pain, Distress, Analgesia and Anesthesia, Euthanasia and Drug Storage and Control, Occupational Health and Safety Program.

2) Inspect at least once every 6 months all of the Institution's animal facilities, including satellite facilities and animal surgical sites, using the *Guide* as a basis for evaluation. The IACUC procedures for conducting semiannual facility inspections are as follows:

a) Using the Semiannual Facilities Inspection Checklists, as least five voting members of the IACUC will inspect all the animal facilities. The animal facilities inspections follows the program review. Any deficiencies are noted and documented in the minutes of the IACUC meeting along with any minority views. The Institutional Official is informed verbally and in writing by the IACUC chairman within 48 hours of the IACUC meeting if any deficiencies are noted. The Institutional Official immediately issues verbal and written directives to the responsible person(s) describing the deficiency and issues verbal and written instructions on how to correct the deficiency with a stated timetable for completion of the correction(s). This same policy occurs following any noted deficiencies during a USDA facilities inspection.

3) The IACUC Chairman will prepare and sign reports of the IACUC evaluations according to PHS Policy IV.B.3. and submit the reports to the Institutional Official. The IACUC procedures for developing reports and submitting them to the Institutional Official are as follows:

a) The semiannual report to John M Carwile, M.D., the Institutional Official, follows the form recommended by OLAW. See attached form for the last report from the IACUC to the Institutional Official.
b) If the IACUC identifies any departures from the PHS policy as stated in the Guide during the program and facilities inspections such departures will be immediately stopped. No departures from the Guide will be approved.
c) All deficiencies following program and facilities reviews by the IACUC as well as any reported by the USDA inspector will be documented and designated as minor or significant in the checklist and written into the minutes of the IACUC meeting. The Institutional Official will be informed orally and in writing of said deficiencies within 48 hours following the IACUC meeting or the USDA inspection. The Institutional Official will meet with the attending veterinarians and the appropriate animal care manager(s) and discuss the deficiencies immediately upon being notified of the deficiencies. A written plan with a timetable will be developed to correct the deficiencies.
d) The Semiannual Report to the Institutional Official states that the institution adheres to PHS Policy and the Guide.
e) The IACUC will not approve departures from the PHS Policy and the Guide so no reasons will be given for any departure.
f) Any deficiencies noted in the program and facilities or USDA inspections will be designated minor or significant. A significant deficiency is any problem that could immediately result in injury, discomfort or in any way endanger the health and well-being of an animal.
g) Reporting and scheduling correction plans for deficiencies is stated c above.
h) All minority views will be recorded in the IACUC along with reasons for the minority view. Minority views will be reported to the Institutional Official in writing within 48 hours of the IACUC meeting.
i) The Semi-annual Report to the Institutional Official is signed by the majority of the voting IACUC members prior to submission to the IO.

1) Review concerns involving the care and use of animals at the Institution. The IACUC procedures for reviewing concerns are as follows:
    a) To facilitate/enable individuals to report concerns a written standard report form entitled: Animal Care and Use Concerns and Complaints Form.
    b) Although the IACUC has never received a reported concern or complaint in its long history at this Institution should a concern or complaint be received a special IACUC meeting of all IACUC members will be immediately called and held. The person(s) making the concern or complaint may be invited to the IACUC meeting. In each case the IACUC will consider the concern or complaint.
    c) The IACUC will immediately report the concern or complaint to the Institutional Official with a copy of the filed report form. The Institutional Official will meet within 72 hours with the entire IACUC and discuss what was claimed in the report. If thought necessary corrective actions will be formulated and the person(s) presenting the report form will be notified in writing of the decision(s) of the Institutional Official and the IACUC.

2) Make written recommendations to the Institutional Official regarding any aspect of the Institution's animal program, facilities, or personnel training. The procedures for making recommendations to the Institutional Official are as follows:
    a) The IACUC chairman submits a written copy of each semiannual IACUC meeting to the Institutional Official within 48 hours of the IACUC meeting. These minutes include any noted minor or significant deficiencies in the institution's policies and facilities. The IACUC will include in the minutes recommendations for the correction of the stated deficiencies.

During the new business item on the IACUC meeting agenda any member of the IACUC may present recommendations based on facts, opinions or discussion concerning the institution's animal program, facilities and personnel training policies or activities. Any such recommendations will be entered into the minutes of the meeting and reported to the Institutional Official. Any such

c) Any time between the scheduled semiannual IACUC meetings, each member of the IACUC may submit written recommendations based on facts, opinions or plans to the Institutional Official concerning the institution's animal program, facilities and personnel training policies or activities. These written recommendations to the Institutional Official will be reviewed by the entire IACUC at the next scheduled semiannual meeting unless the Institutional Official deems the recommendation(s) to be of such importance that a request will be made that the chairperson call a special meeting of the entire IACUC the purpose being to discuss the contents of the recommendation(s).

6) Review and approve, require modifications in (to secure approval), or withhold approval of PHS-supported activities related to the care and use of animals according to PHS Policy IV.C.1-3. The IACUC procedures for protocol review are as follows:
   a) (b) (6) at this institution gives a copy of the Standard Protocol for Polyclonal Antibody Production to the chairperson of the IACUC prior to the IACUC meeting. This standard protocol is used for all in-house antibody production and for custom antibody production for other institutions.
   b) No pre-review or initial screening is done.
   c) IACUC members are notified with the IACUC meeting agenda and copies of the standard protocol is once again presented to each member at the IACUC meeting.
   d) Materials are distributed to members as stated in c. above.
   e) Meetings are conducted following the meeting agenda and at the stated time the standard protocol is discussed in as much detail as required by any member of the IACUC. Following discussion of the protocol, a show of hands vote to approve, approved with modifications or reject is taken.
   f) The protocol review is done by the full committee (FCR). The review process and possible outcomes are listed in e. above.
   g) Conflicts of interest should one or more occur are openly discussed by the full committee. If an agreement cannot be reached the vote on the protocol will be taken where a majority vote will carry the result of the protocol review. The member(s) expressing disagreement may ask that the disagreement be included as a minority view in the minutes of IACUC meeting.
   h) The voting process is described in e. and g. above.
   i) If a modification to the protocol is needed prior to a scheduled meetings, an email is sent to IACUC members with a Modification Request Application. Members will respond with questions then approval or rejection. If members approve, the signature page is sent for signature.

7) Review and approve, require modifications in (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities according to PHS Policy IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are as follows:
   a) If during the IACUC's review of the Standard Polyclonal Antibody Production Protocol this protocol will not be approved without modifications the protocol will be returned to the principal investigator with or without specific suggested modifications.
   b) After modifications are made by the principal investigator a special meeting of the IACUC will be called and a quorum must be.
   c) After discussion of the modifications a show of hands vote taken the protocol will be approved as modified or not approved pending further modifications. In such case the above process will be repeated.

8) Notify investigators and the Institution in writing of its decision to approve or withhold approval of those activities related to the care and use of animals, or of modifications required to secure IACUC approval according to PHS Policy IV.C.4. The IACUC procedures to notify investigators and the Institution of its decisions regarding protocol review are as follows:

a) The IACUC will notify in writing within 5 business days of receiving a request(s) for a significant change(s) that change(s) have been approved or rejected. No significant change(s) will be reviewed and approved for on-going projects. If this is unacceptable to the investigator the project will be immediately terminated and the animals euthanized.

9) Conduct continuing review of each previously approved, ongoing activity covered by PHS Policy at appropriate intervals as determined by the IACUC, including a complete review at least once every 3 years according to PHS Policy IV.C.1.-5. The IACUC procedures for conducting continuing reviews are as follows:
   a) The IACUC process for continuing review of the Standard Animal Care and Use Protocol for polyclonal antisera production is once every six months at each regular IACUC meeting by FCR. The daily monitoring of the antibody production process as stated in the Standard Protocol is done by the two attending veterinarians. The veterinarians report to the IACUC there observed monitoring at each IACUC meeting.

10) Be authorized to suspend an activity involving animals according to PHS Policy IV.C.6. The IACUC procedures for suspending an ongoing activity are as follows:
   a) If any member of the IACUC, the USDA Inspector or a concerned citizen(s) completes the ANIMAL CARE AND USE CONCERNS AND COMPLAINTS Form, the Institutional Official or IACUC chairperson will call a special IACUC meeting to be held within 7-14 days. A FCR will be held to examine the concern and/or complaint and to determine if the protocol is indeed not being followed.
   b) After FCR and a majority vote of the quorum of the IACUC members that the protocol is not being followed the IACUC will immediately suspend all previously approved activities for in-house and custom polyclonal antibody production. This will include the immediate cessation of all immunization and blood collection procedures. When the IACUC suspends a previously approved activity, the Institutional Official in consultation with a quorum of the IACUC members shall review the reasons for the suspension, take appropriate corrective action(s) and report the action(s) with full explanation for the action(s) to OLAW within 7-14 days.
   c) After corrective action(s) is completed to correct the concern(s) or complaint(s) and such corrective action(s) has been approved by another IACUC meeting with FCR then polyclonal antibody production can be resumed.

E. The risk-based occupational health and safety program for personnel working in laboratory animal facilities and personnel who have frequent contact with animals is as follows:
   a) The Occupational Health and Safety Program (OHSP) at Bethyl Laboratories, Inc. is based on Risk Assessment and Hazard Identification. To identify the potential hazards and associated risks, the Institutional Official appoints a Environmental Health and Safety officer. With the help of animal facilities supervisors, facilities and farm managers, scientists, the attending veterinarians and the on staff medical doctor, the EHS officer continually assesses and evaluates the risks and hazards of the work place along with the health and safety of all personnel. The EHS officer will determine appropriate strategies to minimize or manage risk or potential hazards. Potential hazards could include experimental hazards (such as chemical agents) and physical hazards (such as needles). Other hazards assessed by the safety officer could include (but not limited to) animal bites, exposure to allergens, chemical cleaning agents, wet floors, cage washers and other machinery, lifting of heavy materials, ladder use and zoonotic diseases. Appropriate actions, including additional training of employees, implementation of polices, usage of personal protective equipment(PPE) and implementation of safeguards, areinitiated by the EHS officer under advisement of the safety committee.
   b) Pre-employment Medical History and Exam: An interview is conducted by (b) (6) (b) (6) prior to employment regarding any allergies, sensitivities, disabilities or other significant medical conditions, and last tetanus shot.

No pre-employment physical exam is required. The medical evaluation meets federal, state and local HIPAA regulations.

c) Tetanus immunization or booster tetanus shot is offered to employees that are not up to date. Bethyl Laboratories will not mandate an employee to have a Tetansu shot. Tetanus shots are given at the expense of Bethyl Laboratories, Inc.

d) During orientation training and during retraining, employees are trained on the precautions to be taken during personnel pregnancy, illness, or decreased immunocompetence. III.E.e.,f., and g, address actions to take.

e) Women that are/become pregnant during the course of their employment at Bethyl Laboratories should notify their supervisor as soon as possible. The employee may be temporarily reassigned to an office job where the risk of exposure to potential agents that could be harmful to the fetus is extremely reduced or non-existent. This will be taken as a precautionary measure to minimize risks to the pregnancy. The employee will return to their previously held position after pregnancy.

f) Employees with illnesses should seek medical attention from a licensed physician. Bethyl Laboratories provides full medical health coverage to all employees. An employee who is ill will not be permitted to work and can only return to their job with a release from their physician stating that the employee is free from illness and is capable of performing their job duties.

g) Employees with weakened or compromised immune systems will be advised on preventative actions to minimize the risk of disease. The employee should be evaluated by a licensed physician to determine risk. If the weakened or compromised immune system is due to illness or therapy the employee must be released by their physician to return to work as described above. Minimally the employee will be instructed on preventative measures such as cleaning and hygiene, including frequent hand washing and the use of PPE. Additionally the employee will not be allowed to clean cages and contact with animals should be minimal. In the event that the employee has an ongoing medical condition causing a compromised immune system that individual may be reassigned to an office job where risk of disease is minimal.

h)

i) All personnel are instructed that safety is their first concern. Each employee is told to be aware of the working environment and to not start and to stop any job if any sign(s) of unsafe conditions exist. This statement includes working outdoors if any lightning is seen in the area. Any presumed un-safe condition is to be reported immediately to a supervisor.

j) All personnel are required to maintain good personal hygiene. Locker and shower facilities are provided for showers and change of clothes should the need arise. Eating and drinking should be limited to the kitchen and break areas provided. Smoking is prohibited on Bethyl Laboratories premises.

k) PPE will be provided and used if required under specific circumstances. These include gloves, rain ware, protective eye glasses and protective clothing and shoe covers.

l) Chemical Hazards: Safety Data Sheets (SDS) will be maintained for all chemicals used a Bethyl Laboratories, Inc. The SDS's are available to all personnel at any time using the VelocityEHS cloud-based MSDSonline chemical management tool. Personnel working in the facility will be trained in the use and hazards of the chemicals. Disposal of all chemicals will follow the guidelines and specifications of the EPA and TCEQ. All required chemicals will be disposed of by Tradebe Environmental Services, LLC, an approved licensed chemical disposal company.

m) All chemical spills must be reported immediately to the Debbie Garrett (EHS officer), John M. Carwile, M.D., Henry F. Carwile, D.V.M. and/or (b) (6) Corrective action resulting from a reported spill will be directed by one or more of these individuals.

n) All chemical accidents where personnel are exposed to chemicals will be reported immediately to Debbie Garrrett (EHS officer), John M. Carwile, M.D., Henry F. Carwile, D.V.M. and/or (b) (6) Immediate medical attention will be provided if deemed necessary. An accident report will be completed and filed for each accidental injury.

o) All blood collection procedures require the use of rubber gloves. All sharps used in blood collection procedures will be placed in approved sharps containers immediately

after use and disposed of along with all bio-hazard waste by (b) (4) (b) (4) an approved and licensed bio-hazard disposal company.

p) All serum and plasma processing procedures require the use of rubber gloves and protective eyewear.

q) All animal care personnel are under the direct daily (including weekends and holidays) supervision of the attending veterinarian and are trained by the attending veterinarian in proper prevention of zoonotic diseases and proper handling of animals to prevent scratches, bites, kicks and other types of animal induced trauma. Should zoonosis or accidents occur from animal handling procedures the event of accident(s) must be reported immediately to safety officer, John M. Carwile, M.D., Henry F. Carwile, D.V.M., Stacy Carwile, D.V.M and/or (b) (6) Immediate medical attention will be provided if deemed necessary. First aid procedures will be provided in all cases and an Accident Report Form must be completed. Any unexplained febrile condition in any animal care personnel must be reported to one of the above listed persons and John M. Carwile, M.D., will examine the febrile employee and if deemed necessary special attention to Q fever and Tularemia with appropriate test performed for these diseases.

r) All injuries resulting from physical, mechanical, electric or environmental hazards must be reported immediately to Debbie Garrett (EHS officer), John M. Carwile, M.D., Henry F. Carwile, D.V.M., and/or (b) (6) Immediate medical attention will be provided if deemed appropriate and first aid procedures will be applied in all cases. An Accident Report (shown above) must be completed in all cases of injury.

F. The total gross number of square feet in each animal facility (including each satellite facility), the species of animals housed there and the average daily inventory of animals, by species, in each facility is provided in the attached Facility and Species Inventory table.

G. The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is as follows:

a) Six of the seven IACUC members are Bethyl employees and receive the formal and informal training procedures listed below. These employees attend periodic lectures by Bethyl's scientist and veterinarians on how Bethyl's antibody products are produced and how they are used by our Customers throughout the world. The importance of how these products are used in cancer and other medical research is also taught to all Bethyl employees. New non-affiliated IACUC members receive initial orientation in the animal Facilities and proper animal use and care following the Guide. The Standard Polyclonal Antibody Production Protocol is read, explained and discussed.

b) All IACUC members receive a personal copy of the Guide for home use. Each IACUC member also receives a copy of the approved Animal Welfare Assurance document. All IACUC members are encouraged at Bethyl's expense to attend a Scientists Center for Animal Welfare IACUC Training Workshop. The Members are also encouraged to use the USDA, APHIS website for on-line IACUC training when available.

c) Informal Training: All personnel involved in the care, handling, manipulation (immunization and blood collection procedures) and treatment of animals at the institution work daily (including holidays and weekends) under the direct supervision of the attending veterinarian(s). If deemed necessary by the attending veterinarian verbal instructions and demonstrations are presented to the animal care personnel on a daily basis. All scientific personnel both in-house and from outside the institution that request the use of animals for polyclonal antisera production are given verbal advise and training by the attending veterinarian concerning species selection, animal numbers required, standard immunization and blood collection procedures, serum volume expected along with any hazards that may be incurred with use of the animal antisera. No scientist both in-house and from an outside institution will ever be allowed to do any animal manipulations (immunization and blood collection).

d) Formal Training: All animal care personnel receive semiannual formal training by the attending veterinarians, by formal review of all animal care and use Standard Operating Procedures, by purchased videos and other published material present in

the institution's library including the Guide for the Care and Use of Laboratory Animals. This formal training focuses on humane methods for animal maintenance including all aspects of animal care for each species such as feeding, watering, housing, animal comfort procedures such as temperature and ventilation control and animal handling during immunization and bleeding procedures. Procedures for the daily observation of all animals for injury and/or disease with the appropriate reporting forms are discussed. All formal training sessions are recorded showing the personnel present, the topics discussed and the time involved. All in house scientists requesting animal use for antibody production must attend semiannual formal training sessions with the attending veterinarians to discuss species selection, animal numbers necessary to accomplish goals and ways to avoid duplication. Bethyl Laboratories has developed B-cell sorting and recombinant DNA technology for producing recombinant rabbit monoclonal antibodies in an effort to reduce the number of animals needed.

IV. Institutional Program Evaluation and Accreditation

All of this Institution's programs and facilities (including satellite facilities) for activities involving animals have been evaluated by the IACUC within the past 6 months and will be reevaluated by the IACUC at least once every 6 months according to PHS Policy IV.B.1.-2. Reports have been and will continue to be prepared according to PHS Policy IV.B.3. All IACUC semiannual reports will include a description of the nature and extent of this Institution's adherence to the PHS Policy and the *Guide*. Any departures from the *Guide* will be identified specifically and reasons for each departure will be stated. Reports will distinguish significant deficiencies from minor deficiencies. Where program or facility deficiencies are noted, reports will contain a reasonable and specific plan and schedule for correcting each deficiency. Semiannual reports of the IACUC's evaluations will be submitted to the Institutional Official. Semiannual reports of IACUC evaluations will be maintained by this Institution and made available to the OLAW upon request.

(1) This Institution is Category 2 — not accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). As noted above, reports of the IACUC's semiannual evaluations (program reviews and facility inspections) will be made available upon request. The report of the most recent evaluations (program review and facility inspection) is attached.

V. Recordkeeping Requirements

A. This Institution will maintain for at least 3 years:
   1. A copy of this Assurance and any modifications made to it, as approved by the PHS
   2. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations
   3. Records of applications, proposals, and proposed significant changes in the care and use of animals and whether IACUC approval was granted or withheld
   4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the Institutional Official, [John Carwile, M.D., Chief Executive Officer].
   5. Records of accrediting body determinations

B. This Institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the IACUC for the duration of the activity and for an additional 3 years after completion of the activity.

C. All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

VI. Reporting Requirements

A. The Institutional reporting period is the calendar year (January 1 – December 31). The IACUC, through the Institutional Official, will submit an annual report to OLAW by January 31 of each year. The annual report will include:
   1. Any change in the accreditation status of the Institution (e.g., if the Institution obtains accreditation by AAALAC or AAALAC accreditation is revoked)
   2. Any change in the description of the Institution's program for animal care and use as described in this Assurance
   3. Any change in the IACUC membership
   4. Notification of the dates that the IACUC conducted its semiannual evaluations of the Institution's program and facilities (including satellite facilities) and submitted the evaluations to the Institutional Official, [John Carwile, D.V.M., Chief Executive Officer].
   5. Any minority views filed by members of the IACUC

B. The IACUC, through the Institutional Official, will promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to:
   1. Any serious or continuing noncompliance with the PHS Policy
   2. Any serious deviations from the provisions of the *Guide*
   3. Any suspension of an activity by the IACUC

C. Reports filed under VI.A. and VI.B. above should include any minority views filed by members of the IACUC.

VII. Institutional Endorsement and PHS Approval

A. Authorized Institutional Official

Name: John M. Carwile, M.D.

Title: Chief Executive Officer

Name of Institution: Bethyl Laboratories, Inc.

Address: *(street, city, state, country, postal code)*

25043 West FM 1097, Montgomery, TX, USA, 77356

Phone: (b) (6) Fax: (b) (6)

E-mail: jcarwile@bethyl.com

Acting officially in an authorized capacity on behalf of this Institution and with an understanding of the Institution's responsibilities under this Assurance, I assure the humane care and use of animals as specified above.

Signature: John M. Carwile, MD Digitally signed by John M. Carwile, MD DN: cn=John M. Carwile, MD, o=Bethyl Laboratories, Inc., ou=Administration, email=jcarwile@bethyl.com, c=US Date: 2017.05.16 13:30:27 -05'00' Date: 5/16/17

B. PHS Approving Official *(to be completed by OLAW)*

Dr. Venita B. Thornton - Senior Assurance Officer
Office of Laboratory Animal Welfare
National Institutes of Health
6705 Rockledge Drive
RKL1, Suite 360, MSC 7982
Bethesda, MD 20892-7982

Signature: (b) (6) Date: 6/5/17

Assurance Number: D16-00559 (A3991-01)

Effective Date: 6/5/17 Expiration Date: March 31, 2021

VIII. Membership of the IACUC

Date: 4/11/2017	
Name of Institution: Bethyl Laboratories, Inc.	
Assurance Number: A3991-01	
IACUC Chairperson	
Name*: Debra Garrett	
Title*: Vice President of Risk Management	Degree/Credentials*: B.S. Microbiology, Full time employee at Bethyl Laboratories for 32 years
Address*: *(street, city, state, zip code)* 25043 West FM 1097, Montgomery, TX 77356	
E-mail*: dgarrett@bethyl.com	
Phone*: (b) (6)	Fax*: (b) (6)

IACUC Roster

Name of Member/ Code**	Degree/ Credentials	Position Title***	PHS Policy Membership Requirements****
Henry F. Carwile	B.S., D.V.M., M.S. M.S. in Hygiene	Chief Attending Veterinarian	Attending Veterinarian
Stacy Carwile	B.S., D.V.M.	Staff Veterinarian	Veterinarian
(b) (6)			Scientist
			Non-Scientist
			Animal Care Manager
			Non-Affiliated Member

* This information is mandatory.

** Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this submission to OLAW. Sufficient information to determine that all appointees are appropriately qualified must be provided and the identity of each member must be readily ascertainable by the institution and available to authorized OLAW or other PHS representatives upon request.

*** List specific position titles for all members, including nonaffiliated (e.g., banker, teacher, volunteer fireman; not "community member" or "retired").

**** PHS Policy Membership Requirements:

Veterinarian	veterinarian with training or experience in laboratory animal science and medicine or in the use of the species at the institution, who has direct or delegated program authority and responsibility for activities involving animals at the institution.
Scientist	practicing scientist experienced in research involving animals.
Nonscientist	member whose primary concerns are in a nonscientific area (e.g., ethicist, lawyer, member of the clergy).
Nonaffiliated	individual who is not affiliated with the institution in any way other than as a member of the IACUC, and is not a member of the immediate family of a person who is affiliated with the institution. This member is expected to represent general community interests in the proper care and use of animals and should not be a laboratory animal user. A consulting veterinarian may not be considered nonaffiliated.

[*Note: all members must be appointed by the CEO (or individual with specific written delegation to appoint members) and must be voting members. Non-voting members and alternate members must be so identified.*]

IX. Other Key Contacts (optional)

If there are other individuals within the Institution who may be contacted regarding this Assurance, please provide information below.

Contact #1	
Name:	
Title:	
Phone:	E-mail:
Contact #2	
Name:	
Title:	
Phone:	E-mail:

X. Facility and Species Inventory

Date: April 12, 2017			
Name of Institution: Bethyl Laboratories, Inc.			
Assurance Number: A3991-01			
Laboratory, Unit, or Building*	Gross Square Feet [*include service areas*]	Species Housed [*use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog*]	Approximate Average Daily Inventory
(b) (4)	4,000	Rabbits	400 Breeding Barn Rabbits
	4,000	Rabbits	200 Production Rabbits
	6,000	Rabbits	300 Production Rabbits
	4,000	Rabbits	400 Breeding Barn Rabbits
	6,000	Rabbits	300 Production Rabbits
	6,000	Rabbits	300 Production Rabbits
	6,000	Rabbits	300 Growing Rabbits
	6,000	Rabbits	300 Growing Rabbits
	6,000	Rabbits	300 Growing Rabbits
	5 acres	Goats& Sheep	60 Production Goats/Sheep
	7 acres	Goats & Sheep	60 Production Goats/Sheep
	10 acres	Goats & Sheep	60 Production Goats/Sheep
	10 acres	Goats & Sheep	60 Production Goats/Sheep
	10 acres	Goats & Sheep	60 Production Goats/Sheep
	10 acres	Goats & Sheep	60 Off Production Goats & Sheep
	20 acres	Goats & Sheep	100 Pre-Production Goats & Sheep
	20 acres	Donkeys	23 Production + Pre-Production Donkeys
	600		
	10,000 sq. ft.		
	1200 Sq ft Sheds		
	600 Sq ft		

*Institutions may identify animal areas (buildings/rooms) by a number or symbol in this submission to OLAW. However, the name and location must be provided to OLAW upon request.

BETHYL
LABORATORIES, INC

Subject: Semi-Annual Evaluation of Animal Care and Use Program and Inspection of Facilities
Date: November 2, 2016

To: John M. Carwile, MD
Chief Executive Officer
Bethyl Laboratories, Inc.
P.O. Box 850
Montgomery, TX 77356

From: Institutional Animal Care and Use Committee
Chairman – Debbie Garrett Debbie Garrett

This represents the semi-annual report of the Institutional Animal Care and Use Committee (IACUC), as required by the PHS Policy on Humane Care and Use of Laboratory Animals and as a condition of this Institution's Animal Welfare Assurance on file with the Office for Protection from Research Risks, and USDA Animal Welfare Regulations, CFR Chapter I, subchapter A, as applicable.

Evaluation of the Animal Care and Use Program

The IACUC conducted its semi-annual evaluation of Bethyl Laboratories, Inc. animal care and use program on November 2, 2016, using the Guide for the Care and Use of Laboratory Animals, and, as applicable, 9 CFR Chapter I, 2.31.

Protocol was updated and the following change approved: Rabbits must weigh at least 9 lbs and be at least 7 months of age before immunization protocol can be applied.

All aspects of the program are consistent with the PHS Policy, the Guide, and applicable Animal Welfare Regulations.

INSPECTION OF ANIMAL FACILITIES

The IACUC inspected the animal facilities on November 2, 2016, using the Guide, and, as applicable, 9 CFR Chapter I, 2.31. Each animal facility and applicable laboratory facilities were inspected by all members of the IACUC present.

No deficiencies were observed by the IACUC and all animal facilities and applicable laboratory facilities are consistent with the PHS Policy, the Guide, and applicable Animal Welfare Regulations.

MINORITY VIEWS

No minority views were expressed by the IACUC.

SIGNATURES

Names of IACUC Members	Signatures
Debra Garrett, Chairman	(b) (6)
(b) (6)	
Henry F. Carwile, D.V.M.	
(b) (6)	
Stacy Carwile, D.V.M.	
(b) (6)	