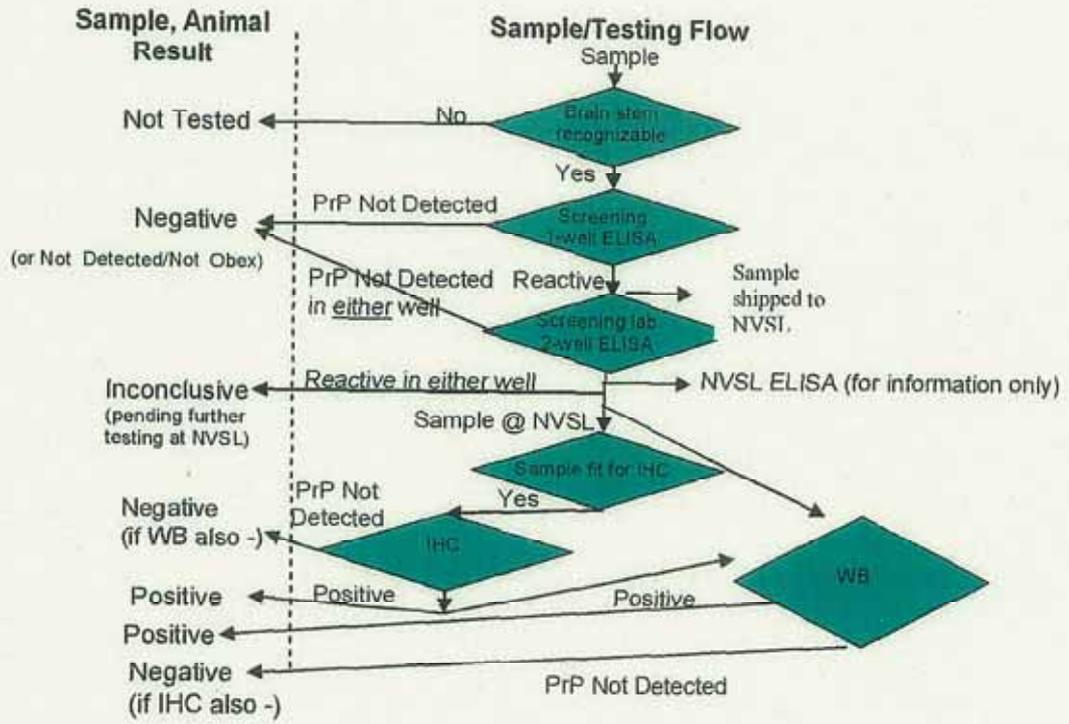
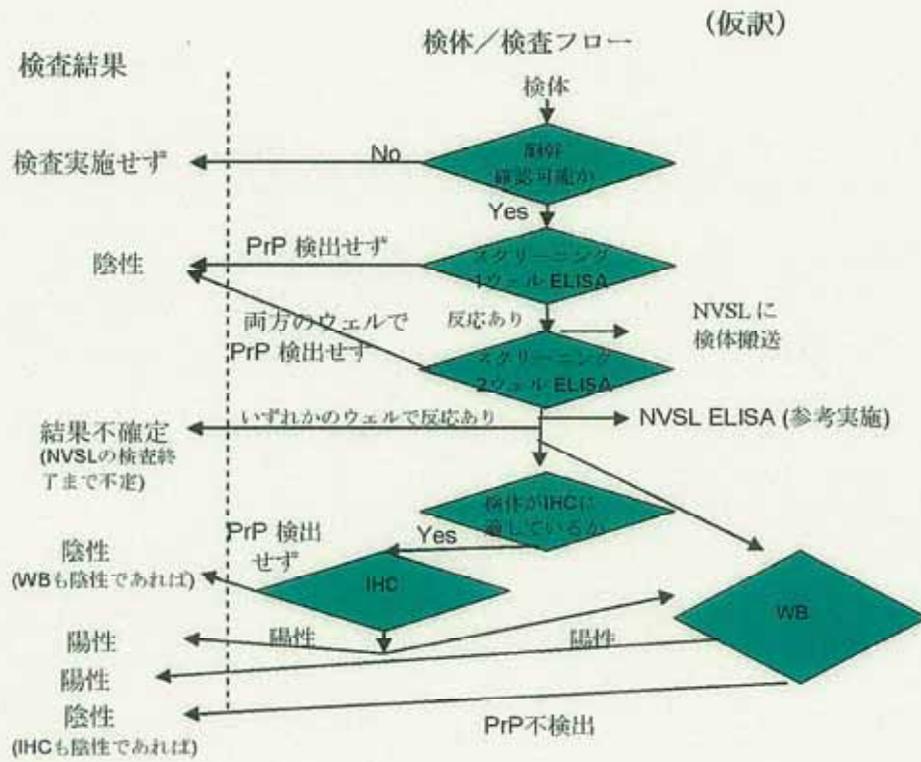


1. 米国のサーベイランスのテストフロー





United States Department of Agriculture
National Veterinary Services Laboratories

Standard Operating Procedure

ELISA Test Procedure
for
Bovine Spongiform Encephalopathy

Date: August 11, 2004
Supersedes: GPPISOP0030.01
Number: GPPISOP0030.02
Contact Person: Roger E. Brannian

Approvals:

/s/Mark Hall Date: 8/17/04
S. Mark Hall, Head
General Pathology and Pathology Investigations Section

/s/Paul F. Ross, Acting Date: 8/17/04
Arthur J. Davis, Chief
Pathobiology Laboratory

United States Department of Agriculture
Animal and Plant Health Inspection Service
P. O. Box 844
Ames, IA 50010

FOR INTERNAL USE ONLY

Mention of trademark or proprietary product does not constitute a guarantee or warranty of the product by USDA and does not imply its approval to the exclusion of other products that may be suitable.

ELISA Test Procedure for Bovine Spongiform Encephalopathy

Purpose:

The purpose of this standard operating procedure (SOP) is to document the proper technical procedure for performance of the enzyme-linked immunosorbent supplemental assay (ELISA) test for bovine spongiform encephalopathy (BSE) at the National Veterinary Services Laboratories (NVSL), Pathobiology Laboratory (PL), General Pathology and Pathology Investigations (GPPI) Section and at designated BSE contract laboratories.

Test Preparation:

Receiving, log-in, sample identification, safety, and sample handling procedures are followed in accordance with the current version of NVSL SOP, "Tracking Protocol for ELISA Test Samples for Bovine Spongiform Encephalopathy" (GPPISOP0031) or, in the case of BSE contract laboratories, in accordance with protocols developed at each individual laboratory.

Cut-in Procedure:

The obex area of the brain stem must be sampled for optimal detection of protease resistant prion protein (PrP^{res}). The NVSL protocol for cutting in the obex differs from the manufacturer's test kit instructions (Bio-Rad TeSeE™ Purification Kit) and is outlined in the following paragraph. This deviation is employed to conserve sample material in the event additional tests are required.

Organize samples in appropriately labeled grinding tubes in numerical order. Make sure the scale is balanced. Place a disposable weigh boat on the balance scale and zero the scale. For each sample, use clean forceps to gently work around the edges of the brain stem and allow the tissue to slide onto another weigh boat. With a sterile scalpel, make a cut to unilaterally remove brain stem tissue that encompasses one of the dorsal vagal nuclei located at the level of the obex. (The sample should incorporate one dorsal vagal nucleus, but NOT both). The sample tissue is placed in the weigh boat on the scale and must weigh 350 +/- 40 mg. Slide the tissue into a grinding tube and use a wood stick or forceps to push the tissue into the buffer. Discard the scalpel and all weigh boats in appropriate biohazard containers. Upon completion of cut-in, the samples are held in a controlled access refrigerator pending testing.

After all the samples from a particular case submission are cut-in, place the samples into a clean bag with the identifying Lab ID number and a copy of the VS 10-4 form, which should include the date and initials of the person cutting in. Any comments on the condition of the samples (autolyzed, mutilated, inappropriate anatomical location, etc.) should also be noted on the VS 10-4 form.

ELISA Test Procedure for Bovine Spongiform Encephalopathy

Cut-In Cards:

After cut-in, a cut-in card should be filled out. The form must include the Lab ID number, the initials of the person cutting in, and any determinations on the suitability of the sample for testing as outlined in the following paragraph.

Any samples that are received but are not clearly recognizable as brain stem will not be tested and the results will be reported as Not Tested. For brain stem samples received that have no recognizable obex, test results will be reported but qualified as Not Detected/Not Obex for inappropriate location. (Note that the print-out result from the test equipment will still read ND for not detected, so the inappropriate location information has to be obtained from the cut-in card). Samples suitable for testing will be reported as described in the current version of NVSL SOP, "Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report Results for BSE Surveillance" (GPPISOP0032).

Performance of the ELISA BSE Test:

Aside from the specific above-noted deviation involving the cut-in procedure and the deviation listed below, the NVSL sample purification process follows the manufacturer's instructions for semi-automated processing of the purification protocol (TeSeE™ and TeSeE™ NSP manuals). A deviation from the manufacturer's protocol is that NVSL uses a sample homogenate volume of 350 - 500 microliters (rather than 300 - 750 microliters) to insure there is an adequate amount of sample to perform the test. However, no more than 500 microliters should be used to make sure the sample can be run multiple times if necessary.

In the event of a known splashing or pipetting error, the technician should document the error and report to their supervisor **PRIOR TO READING THE PLATE**. In such cases of a documented error or a run failure that results in NVSL/inconclusive results being generated, the samples should be retested in the primary laboratory before sending samples to NVSL. If, after repeating the sample that had a documented error, the repeated sample results were ND, there would be no need for a contract lab to forward the sample to NVSL.

United States Department of Agriculture
National Veterinary Services Laboratories

Standard Operating Procedure

Protocol for BSE Contract Laboratories to
Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Date: March 10, 2005
Supersedes: GPPISOP0032.03, October 26, 2004
Number: GPPISOP0032.04
Contact Person: Arthur J. Davis, (515) 663-7526

Approvals:

/s/ Arthur J. Davis
Arthur J. Davis, Chief
Pathobiology Laboratory

Date: 4/29/05

/s/ Randall L. Levings
Randall L. Levings, Director
National Veterinary Services Laboratories

Date: 11 May 05

United States Department of Agriculture
Animal and Plant Health Inspection Service
P. O. Box 844
Ames, IA 50010

FOR INTERNAL USE ONLY

Mention of trademark or proprietary product does not constitute a guarantee or warranty of the product by
USDA and does not imply its approval to the exclusion of other products that may be suitable.

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

The purpose of this Standard Operating Procedure (SOP) is to outline procedures necessary for bovine spongiform encephalopathy (BSE) contract laboratories to follow in order to provide testing and reporting services to the United States Department of Agriculture (USDA) in support of National BSE surveillance.

Sample Receipt

Bovine brain stem (including obex) samples are received fresh from submitters for testing. Samples recognizable as obex will be tested according to the current version of National Veterinary Services Laboratories (NVSL) SOP, "Tracking Protocol for ELISA Test Samples for BSE" (GPPISOP0031). If the sample received is not recognizable as from the brain stem by the receiving laboratory personnel, then the sample is not a valid sample and cannot be used for testing by this procedure. The sample must be discarded for purposes of surveillance. Samples of this category are termed as Not Tested, but may be abbreviated as NT on the cut-in sheet. If the sample is recognized as from the brain stem but not obex, the sample will be tested per the SOP referenced above, but the result will be qualified with a location statement Not Detected/Not Obex for improper location (may be abbreviated as LOC on the cut-in sheet) (see Appendix 1). Samples recognizable as obex will be tested according to the current version of the prescribed enzyme-linked immunosorbent assay (ELISA) SOP, "ELISA Test Procedure for Bovine Spongiform Encephalopathy" (GPPISOP0030) and considered as a valid sample for BSE surveillance. Appropriate sample tracking records should be maintained by each laboratory to reflect the handling and disposition of all samples received. (NVSL will provide an example document for reference.) Samples should be shipped by the submitter to the laboratories using priority shipping for delivery by no later than noon the next day. Samples received by noon will be tested and results reported the same day. Testing laboratories will be available for sample testing Monday through Saturday.

Procedure for Testing the Sample

Testing the sample involves following the prescribed ELISA SOP (GPPISOP0030) as well as training material provided by NVSL. Testing will be performed under Biosafety Level 2+ conditions.

All fresh tissue sample preparation work and pipetting for this procedure will be performed in a biological safety cabinet and in a separate room or segregated area of the laboratory specifically designated for TSE testing. Other than the controls, only bovine (cattle) tissues shall be run on the plates being used for BSE surveillance. If a known technical flaw in testing (such as accidental splashing of fluids from one plate well to another causing cross contamination or a known plate failure) occurs prior to running the plate, the testing laboratory can/should repeat the run rather than waiting to get known errant results and then forwarding to NVSL for confirmation.

Reporting Results

Results are reported according to instructions given for the USDA, APHIS, VS, BSE Surveillance System.

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Results shall be maintained with strict confidentiality by testing laboratory personnel. Laboratory directors and all laboratory personnel that are expected to have knowledge of BSE test results must sign confidentiality agreements.

The testing laboratory will report results in a manner as set forth below. Terminology for results shall be as follows: For test results where the optical density (OD) reading falls below the not detected (ND) cutoff as set by test kit manufacturer, the test will be reported as **PrP not detected (ND)**. When the OD reading is greater than the cutoff on the initial screen test, the test result will be automatically categorized by the manufacturer's testing equipment as **NVSL 1** or **NVSL 2**.

Any test result so categorized shall be officially termed "**initial reactor**" and immediately, or as soon as possible, will be repeated in duplicate from the original homogenate at the testing laboratory using the BioRad ELISA method (automated NSP robot or manual). The remaining sample from the NSP robot plate on the initial reactor and BOTH duplicates will be collected in individual tubes and frozen. The remaining samples will be shipped frozen to NVSL if EITHER of the results of the duplicate repeats is determined as NVSL 1 or NVSL 2.

If possible, the original fresh tissue from the case will be forwarded to NVSL the same day as the initial reactor is identified. If it is not possible, the tissue should be sent the next day if EITHER of the results of the duplicate testing are NVSL 1 or NVSL 2.

If EITHER of the duplicate repeats results in an NVSL 1 or NVSL 2, the sample will be considered an **INCONCLUSIVE** and the original tissue will be forwarded to NVSL for confirmatory testing using immunohistochemistry (IHC) or other see tests as warranted (see Appendix 2). Prior to shipping approximately 2 cm of the tissue caudal to the obex should be removed, placed in 10 percent neutral buffered formalin and held by the contract laboratory (Appendix 2). Approximately 2 cm of tissue cranial to the obex should also be removed, frozen and held by the contract laboratory. These samples will be retained for one day and shipped to the NVSL the day following the original shipment in the same manner as the original shipment.

- **Reporting PrP Not Detected (ND) Results** -- The testing laboratory will report PrP ND results to the Area Veterinarian in Charge (AVIC), State Veterinarian, and submitter (submitter defined as the name listed in Section 1 of the Veterinary Services (VS) form 10-4 within the particular state from which the animal originated. These results will be routinely reported on the same day that the sample is received (provided the samples are received by noon at the testing laboratory). If results are delayed for longer periods (beyond 48 hours), the testing laboratory should document the reasons for the delay (also see section on "Laboratory Incapacitation").
- **Reporting Inconclusive Results** -- When a test result is designated in this category by the testing laboratory, the result shall be maintained with strict confidentiality by the testing laboratory personnel. The findings will be first reported by the testing laboratory's director or designee to the Director of the National Veterinary Services Laboratories (NVSL) or the NVSL director's

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

designee (See Appendix 3 for telephone contact information). The testing laboratory's director or designee shall also notify the Federal AVIC and State Veterinarian in the state from which the animal sample originated and/or state where the holding facility is located. **The AVIC and State Veterinarian will notify the submitter only after the VS Deputy Administrator's Office or Regional Director has given permission to release information to the plant. This is for the entire batch of samples that accompany the inconclusive. This permission would be done after the markets close.** Disposal of carcasses and/or product being held due to delayed results may be funded by USDA/Veterinary Services. The samples so designated in this category shall be forwarded directly to the NVSL for confirmatory testing where a repeat screening test and any other testing deemed necessary will be performed as referenced in the current version of the NVSL SOP, "**Confirming Inconclusive Results from BSE Testing Laboratories at the NVSL**" (GPPISOP0034). The NVSL Director or the Director's designee will be responsible for reporting results in this category to the VS Deputy Administrator upon notification of the result. **All reporting under this category shall be by telephone contact.**

Forwarding Samples to the NVSL

All tissues AND the remaining homogenate AND the remaining sample from the three wells from the NSP robot plate with at least two test results of NVSL 1 OR NVSL 2 (i.e., Inconclusives) should be forwarded in two shipments (as outlined in paragraph six of **Reporting Results** section) with prior notification and confirmed arrival, to the NVSL by Federal Express (FedEx) (or other means deemed appropriate) for overnight delivery. The sample(s) should be in a box or container that has a security seal and in a manner that maintains chain of custody (per individual testing lab SOP). The USDA APHIS VS will provide security seals (contact Federal AVIC office, Appendix 4) and boxes (NVSL) for shipping. In some cases, normal courier service may be insufficient (e.g., too late for last FedEx pickup). In this case, "FedEx Same Day" service may be used (see Appendix 5). Under special circumstances, laboratory directors will work out the forwarding of the samples to NVSL with the AVIC in order to insure timely sample delivery. This may involve working out circumstances whereby samples are hand carried to NVSL by an AVIC-designated individual.

Sample Retention/Disposal

Contract laboratories will hold ELISA samples under refrigeration (4 degrees C) until tests are completed and test results are obtained. **Do not freeze samples prior to ELISA testing.** Samples that have test results reported as ND shall be retained refrigerated or frozen at the testing laboratory for a minimum of five (5) working days, after which they may be discarded by routine methods. Handling of inconclusive samples is outlined above in the sections, **Reporting Inconclusive Results and Forwarding Samples to the NVSL.** The NVSL staff will periodically do proficiency testing, review testing data, and make site visits to testing laboratories to address quality assurance issues (see current version of the NVSL SOP, GPPISOP0033).

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Decontamination and Disposal of Materials and Equipment Contaminated with Positive Tissue Specimens

For decontamination and disposal of testing plates with a positive test sample or positive control samples, the testing laboratory should refer to guidelines found in the document "TSE Biosafety Guidelines for Veterinary Diagnostic Laboratories" (version 2.0). This document is published by the Canadian Food Inspection Agency, Science Branch, Laboratory Directorate (<http://www.inspection.gc.ca/english/sci/lab/tbgldbe.shtml>).

Laboratory Incapacitation and Sample Redirection

If for any reason the testing laboratory becomes unable to perform testing of samples and reporting of results with "same day turnaround," (e.g., due to personnel shortages or absences, sample overload, equipment malfunction, or other factors), it is the duty of the testing laboratory to coordinate redirecting of sample submissions to an alternate laboratory for testing. Samples should be redirected according to the current version of GPPISOP0043. If samples cannot be redirected to an alternate laboratory in a reasonable period of time, the testing laboratory, with input from the submitter, AVIC, and/or State Veterinarian, will determine if any testing of the samples will be done. This determination is based on the length and effect of the delay in testing or other circumstances as deemed appropriate within the affected state.

Holiday Work

Testing laboratories are expected to perform testing on all holidays with the exception of the following:

Labor Day,
Thanksgiving Day,
Christmas Day, and
New Years Day.

UNCONTROLLED COPY

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Summary of Revisions

Version .04, dated March 10, 2005, is a revision superseding version .03 dated October 26, 2004.

- In the section **Sample Retention/Disposal**, language is clarified to make sure samples are not frozen prior to testing and obtaining test results.
- In paragraph six of the section **Reporting Results**, statements were added to instruct contract laboratories to retain samples caudal and cranial to the obex in formalin and frozen for shipment the day following the first shipment.
- The **Forwarding Samples to the NVSL** section was amended to reflect the changes in paragraph six of the **Reporting Results** section as noted above.
- Appendix 4: Changed Colorado AVIC and Tennessee AVIC.

Version .03, dated October 26, 2004, is a revision superseding version .02 dated August 13, 2004.

- On page 5, changed list of holiday work to add Labor Day and to delete Veterans Day.
- Minor clerical changes were made.

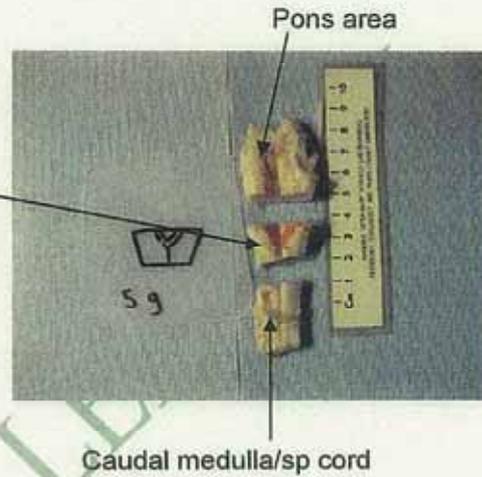
UNCONTROLLED COPY

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Appendix 1

Brainstem Including Obex

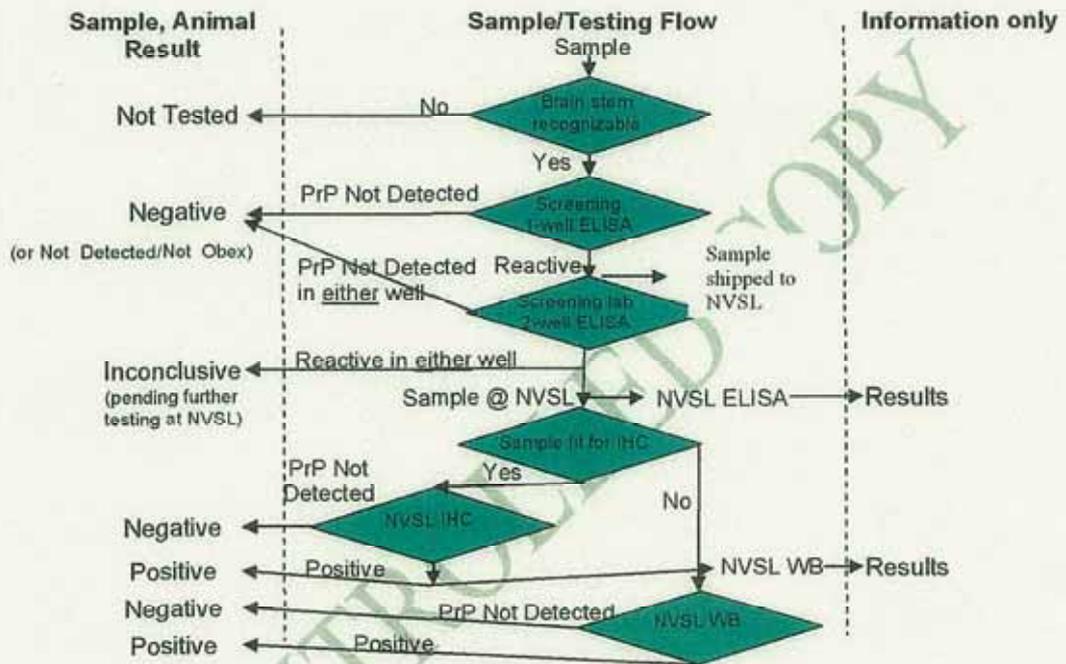
- Middle portion contains obex
- Other two areas can be tested with ELISA if obex is not recognizable (e.g. due to autolysis or mutilation), but would have "location" statement applied



Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report Results for BSE Surveillance

Appendix 2

Sample shipped to NVSL



Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Appendix 3

Telephone Contact Information: NVSL and 12 BSE NAHLN Laboratories

National Veterinary Services Laboratories

USDA, APHIS, VS

1800 Dayton Road

P.O. Box 844

Ames, IA 50010

Dr. Randall Levings, Director

randall.l.levings@aphis.usda.gov

Ph: 515-663-7301

Cell: 515-450-8509

Home: 515-292-4167

Dr. Arthur Davis, Chief, Pathobiology Laboratory

arthur.j.davis@aphis.usda.gov

Ph: 515-663-7526

Cell: 515-231-5427

California

California Animal Health and Food Safety Lab System

P.O. Box 1770

University of California-Davis

Davis, CA 95617

Dr. Alex Ardans, Director

aaardans@ucdavis.edu

Ph: 530-752-8700

Fax: 530-752-5680

Colorado

Colorado State University Veterinary Diagnostic Laboratory

Fort Collins, CO 80523

Dr. Barbara Powers, Director

barb.powers@colostate.edu

Ph: 970-297-1281

Fax: 970-297-0320

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Florida

Animal Disease Laboratory
Florida Dept. of Agriculture
P.O. Box 458006
Kissimmee, FL 34745
Dr. Leigh Humphreys, Assistant Director
humphrl@doacs.state.fl.us
Ph: 850-410-0930
(Dr. Betty Miguel) – Main Contact
miguelb@doacs.state.fl.us
Ph: 407-846-5200 ext. 246
Fax: 407-846-5204

Georgia

Athens Diagnostic Laboratory
College of Veterinary Medicine
University of Georgia
Athens, GA 30602
Dr. Doris Miller, Director
miller@vet.uga.edu
Ph: 706-542-5568
Fax: 706-542-5977

Kansas

Vet Diagnostic Lab
Kansas State University
College of Vet Med
Mosier Hall
Manhattan, KS 66506
Dr. M. M. Chengappa, Director- main contact
chengapa@vet.ksu.edu
Ph: 785-532-4401
(Dr. George Kennedy)- will retire 7/31/04
kennedy@vet.ksu.edu
Ph: 785-532-5650
Fax: 785-532-4039

Kentucky

APHIS/VIS Federal Diagnostic Lab
P.O. Box 399
643 Comanche Trail
Dr. Roger Odenweller, Director
Roger.j.odenweller@aphis.usda.gov
Ph: 502-227-9651 ext. 13
(Natalie C. Looney, Supervisory)
natalie.c.looney@aphis.usda.gov
Ph: 502-227-9651 ext. 22
Fax: 502-223-7121

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Minnesota

Veterinary Diagnostic Laboratory
University of Minnesota
1943 Carter Avenue
St. Paul, MN 55101
Dr. Jim Collins, Director
Colli002@umn.edu
Ph: 612-625-8787
Fax: 612-624-8707

New York

New York State College of Veterinary Medicine
Veterinary Diagnostic Laboratory
Cornell University
Ithaca, NY 14853
Dr. Alfonso Torres, Director
at97@cornell.edu
Ph: 607-253-3900
Fax: 607-253-3943

Pennsylvania

Department of Agriculture
PA Veterinary Laboratory
2305 N. Cameron Street
Harrisburg, PA 17110-9408
Dr. Helen Acland, Director
hacland@state.pa.us
Ph: 717-787-8808 ext. 217
Fax: 717-772-3895

Texas

Texas Veterinary Medical Diagnostic Laboratory
Drawer 3040
College Station, TX 77841
Dr. Lelve Gayle, Director
L-gayle@tvmidl.tamu.edu
Ph: 979-845-9000
Fax: 979-845-1794

Washington

Washington State University Animal Disease Diagnostic Laboratory
P.O. Box 2037
Pullman, WA 99165-2037
Dr. Terry McElwain, Director
tfm@vetmed.wsu.edu
Ph: 509-335-9696
Fax: 509-335-7424

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Wisconsin

Wisconsin Animal Health Laboratory

Wisconsin Dept. of Agriculture

6101 Mineral Point Road

Madison, WI 54705

Dr. Bob Shull, Director

Robert.shull@wvdl.wisc.edu

Ph: 608-262-5432

Fax: 608-262-5005

UNCONTROLLED COPY

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Appendix 4

AVIC Contact Information: Eastern Region

Alabama/Dr. Owen W. Hester, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
P.O. Box 70429
Montgomery, AL 36107
(334) 223-7141
Fax (334) 223-7352

Florida/Dr. Robert E. Southall, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
7022 NW 10th Place
Gainesville, FL 32605-3147
(352) 333-3120
Fax (352) 333-6849

Georgia/Dr. Edgardo Arza, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
1498 Klondike Rd., Suite 200
Conyers, GA 30094
(770) 922-7860
Fax (770) 483-9000

Illinois/Dr. Lennis Knight, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
2815 Old Jacksonville Rd., Suite 104
Springfield, IL 62704
(217) 241-6689
Fax (217) 241-6695

Indiana/Dr. Francisco Collazo-Mattei, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
5685 Lafayette Road, Suite 400
Indianapolis, IN 46278-1928
(317) 290-3300
Fax (317) 290-3311

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Kentucky/Dr. Barbara A. Bischoff, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
P.O. Box 399
Frankfort, KY 40602
(502) 227-9651
Fax (502) 223-7121

Maryland/Delaware/Vacant, AVIC (MD, DE, DC)

Area Veterinarian-in-Charge
USDA, APHIS, VS
1598 Whitehall Road, Suite A
Annapolis, MD 21401
(410) 349-9708
Fax (301) 261-8113

Massachusetts/ New England States/Dr. William G. Smith, AVIC (CT, MA, ME, NH, RI, VT)

Area Veterinarian-in-Charge
USDA, APHIS, VS
160 Worcester-Providence Road
Sutton Square Plaza, Suite 20
Sutton, MA 01590-9998
(508) 865-1421, 22
Fax (508) 865-9317

Michigan/Dr. Reed Macarty, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
3001 Coolidge Road, Suite 325
East Lansing, MI 48823
(517) 324-5290
Fax (517) 324-5289

Minnesota/Dr. Michael L. Stine, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
251 Starkey Street
Bolander Bldg., Suite 229
St. Paul, MN 55107
(651) 290-3691
Fax (651) 228-0654

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Mississippi//Dr. Charles Nettles, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
345 Keyway Street
Flowwood, MS 39232
(601) 965-4307
Fax (601) 965-5535

New Jersey// Dr. Jonathan Zack, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
Mercer Corporate Park
320 Corporate Blvd.
Robbinsville, NJ 08691-1598
(609) 259-8387
Fax (609) 259-2477

New York//Dr. Roxanne Mullanev, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
One Winners Circle, Suite 100
Export/Area Office
Albany, NY 12205-1193
(518) 453-0187
Fax (518) 453-0213

North Carolina//Dr. Eric C. Coleman, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
(919) 855-7700
Fax (919) 855-7720

Ohio/W. Virginia//Dr. Susan Skorupski, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
12927 Stonecreek Drive
Pickerington, OH 43147
(614) 469-5602
Fax (614) 866-1086

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Pennsylvania//Dr. Enzo Campagnolo, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
2301 N. Cameron St., Rm. 412
Harrisburg, PA 17110
(717) 782-3442
Fax (717) 782-4098

Puerto Rico//Dr. Miguel A. Borri-Diaz, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
654 Munoz Rivera Avenue, Suite 700
Hato Rey, PR 00918
(787) 766-6050, 6055, 6060, 6061, 6063
Fax (787) 766-6122

South Carolina//Dr. Delorias M. Lenard, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
9600 Two Notch Road, Suite 10
Columbia, SC 29223
(803) 788-1919
Fax (803) 788-2102

Tennessee//Dr. Allen M. Knowles, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
P.O. Box 110950
Nashville, TN 37222
(615) 781-5310
Fax (615) 781-5309

Virginia//Dr. Ferryl L. Taylor, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
Washington Bldg., 6th Floor
1100 Bank Street
Richmond, VA 23219
(804) 771-2774
Fax (804) 771-2030

Wisconsin//Dr. Linn A. Wilbur, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
6510 Schroeder Road, Suite 2
Madison, WI 53711
(608) 270-4000
Fax (608) 270-4001

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

AVIC Contact Information: Western Region

Arizona//Dr. Hortentia Harris, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
1400 E. Southern Avenue, Suite 245
Tempe, AZ 85282
(480) 491-1002
Fax (480) 491-1895

Arkansas//Dr. Ronnie Blair, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
1200 Cherry Brook Drive, Suite 300
Little Rock, AR 72211
(501) 224-9515
Fax (501) 225-5823

California/Nevada//Dr. Paul Ugstad, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
9580 Micron Avenue, Suite E
Sacramento, CA 95827
(916) 857-6170
Fax (916) 857-6196

Colorado//Dr. Roger Perkins, AVIC (as of 11/14/04)

Area Veterinarian-in-Charge
USDA, APHIS, VS
755 Parfet #136
Lakewood, CO 80215
(303) 231-5385
Fax (303) 231-5390

Idaho//Dr. Cindy Gaborick, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
9158 W. Blackeagle Drive
Boise, ID 83709
(208) 378-5631
Fax (208) 379-5637

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Iowa//Dr. Kevin Petersburg, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
210 Walnut, Room 891
Des Moines, IA 50309
(515) 284-4140
Fax (515) 284-4156

Kansas//Dr. Kevin Varner, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
1947 NW Topeka Blvd, Suite F
Topeka, KS 66608
(785) 235-2365
Fax (785) 235-1464

Louisiana//Dr. Joel Goldman, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
5825 Florida Blvd., Room 1140
Baton Rouge, LA 70806
(225) 389-0436
Fax (225) 389-0524

Missouri//Dr. John R. Bare, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
1442 Aaron Court
Jefferson City, MO 65101
(573) 636-3116
Fax (573) 636-4384

Montana//Dr. Paul Scigliabaglio, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
208 North Montana Ave., Suite 101
Helena, MT 59601
(406) 449-5407
Fax (406) 449-5439

CONTROLLED COPY

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Nebraska/Dr. Kathleen Akin, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
P.O. Box 81866
Lincoln, NE 68501
(402) 434 2300
Fax (402) 434-2330

New Mexico/Dr. Michael Greenlee, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
6200 Jefferson Street NE, Suite 117
Albuquerque, NM 87109
(505) 761-3160
Fax (505) 761-3176

North Dakota/Dr. Larry Schuler, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
3509 Miriam Ave., Suite B
Bismarck, ND 58501
(701) 250-4210
Fax (701) 250-4471

Oklahoma/Dr. Burke Healey, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
4020 North Lincoln Blvd., Suite 101
Oklahoma City, OK 73105
(405) 427-9413
Fax (405) 427-9451

Oregon/Dr. Don Herriot, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
530 Center Street NE, Suite 335
Salem, OR 97301
(503) 399-5871
Fax (503) 399-5607

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

South Dakota//Dr. Lynn Tesar, SD

Area Veterinarian-in-Charge
USDA, APHIS, VS
P.O. Box 640
Pierre, SD 57501
(605) 224-6186
Fax (605) 224-8451

Texas//Dr. Jerry Diemer, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
903 San Jacinto Blvd., Room 220
Austin, TX 78701
(512) 916-5552
Fax (512) 916-5197

Utah//Dr. Robert DeCarolis, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
176 North 2200 West, Suite 230
Airport Park, Building 4
Salt Lake City, UT 84116
(801) 524-5011, 5012
Fax (801) 524-6898

Washington/Alaska/Hawaii//Dr. Gary Brickler, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
2604 12th Ct. SW, Suite B
Olympia, WA 98502
(360) 753-9430
Fax (360) 753-9585

Wyoming//Dr. Bret Combs, AVIC

Area Veterinarian-in-Charge
USDA, APHIS, VS
5353 Yellowstone Rd., Room 209
Cheyenne, WY 82009
(307) 772-2186
Fax (307) 772-2592

Protocol for BSE Contract Laboratories to Receive and Test Bovine Brain Samples and Report
Results for BSE Surveillance

Appendix 5

Federal Express Information

Web site is:
<http://www.fedex.com/us/services/express/us/sameday.html>

Service Info
FedEx SameDay®

With FedEx SameDay, you can send urgent shipments door-to-door within hours, depending upon availability.

Service Description

Delivery Time: Door-to-door within hours, depending upon availability

Service Days: 7 days a week; 365 days a year.

Delivery Area: Available to and from all 50 states

Package Size: Up to 70 lbs. each; with no side exceeding 48".

Extra: Free pickup and delivery. Delivery confirmation call. Saturday service is available. For additional details about Alaska and Hawaii shipments, please see FedEx Alaska/Hawaii Services.

Additional Services

Streamline your shipping with easy-to-complete Shipping Documentation, a range of Packaging options and Multi-Piece shipping

Convenient Payment Options

Simplify your business by choosing from our convenient Payment Options

How to Use

- Call 1.800.GoFedEx 1.800.463.3339. Courier will provide specialized airbill at pick-up.

UNCON