



Procedures Manual: Bovine Spongiform Encephalopathy (BSE) Ongoing Surveillance Program

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Introduction

This document describes the procedures used to implement the Bovine Spongiform Encephalopathy (BSE) Ongoing Surveillance Program. This procedures manual is meant to be dynamic and will be updated as necessary.

Several other Veterinary Services (VS) documents contain policy information that supplements the instructions described in this manual:

- [BSE Ongoing Surveillance Plan](#) (July 20, 2006)
- VS Guidance Document 7800.1 “Procedures for Conducting the Bovine Spongiform Encephalopathy (BSE) Ongoing Surveillance Program”
- BSE Response Plan (version 2020)
- Evaluation of Bovine Spongiform Encephalopathy National Surveillance Program: An analysis of the ongoing surveillance program for bovine spongiform encephalopathy in the U.S. cattle population (January 2018)

Purpose

The purpose of this procedures manual is to provide detailed instructions concerning:

- The targeting criteria for cattle to be sampled as part of this surveillance program;
- Personal safety guidelines;
- Sample collection;
- Data collection;
- Shipping samples to a laboratory;
- Communication protocols; and
- Disposal of the carcass and offal.

Surveillance Plan Overview

The BSE Ongoing Surveillance Program, VS’ long-term BSE surveillance program, was implemented in August 2006 to follow the Enhanced Surveillance Program in which nearly three quarters of a million cattle were tested for BSE. Analysis of data from the Enhanced Surveillance Program revealed that the United States is free from BSE with a very low threshold for detection. The principal purposes of ongoing surveillance for BSE are to continue to monitor and assess changes to the BSE status of U.S. cattle and to provide mechanisms for early detection of BSE. The Ongoing Surveillance Plan is designed to exceed World Organization for Animal Health (OIE) *Type B* surveillance guidelines that require adequate surveillance samples to detect one case of BSE per 50,000 adult cattle with 95 percent

confidence. The Ongoing Surveillance Plan has adopted a more sensitive design prevalence to meet the goal of being able to detect one case of BSE per 1,000,000 adult cattle with 95 percent confidence.

Targeted Subpopulations of Cattle for BSE Sampling as Part of Ongoing Surveillance

The targeted subpopulations for the BSE Ongoing Surveillance Program include cattle (*Bos taurus* and *Bos indicus*) from the following surveillance streams, as outlined in the OIE Terrestrial Animal Health Code: **clinical suspects, casualty (emergency) slaughter, and fallen stock**¹. BSE samples are assigned to the appropriate OIE surveillance stream based on the submission reason, clinical history and/or signs, sample source, and condemnation code, as detailed in the BSE Ongoing Surveillance Plan.

The targeted subpopulations for BSE sample collection (**Attachment A: BSE Ongoing Surveillance Targeting Criteria Flowchart**), as described in the BSE Ongoing Surveillance Plan, are outlined below.

A. Cattle, of any breed 12 months old and older, exhibiting clinical signs of central nervous system (CNS) disease (clinical suspects)

Cattle exhibiting clinical signs of CNS disease are highly valuable with regard to BSE surveillance activities. Cattle in this category are a priority for surveillance and every effort should be made to sample these cattle for BSE, regardless of the site/location where these animals are identified.

Cattle that are less than 12 months old and thus exempted from testing are defined in this document by dentition as “all teeth that have erupted, both incisors and cheek teeth, are deciduous and none is loose.”

Cattle **12 months old and older** highly suspicious for BSE, as described in VS Guidance Document 7800.1 (or current version)

- Cattle with CNS signs - displaying **progressive behavioral changes** that cannot be attributed to infectious illness (including but not limited to apprehension; nervousness; excitability; aggression toward other cattle or humans; head shyness; hypermetria; persistent kicking when milked; difficulty in rising; excessive nose scratching; changes in herd hierarchical status; hesitation at doors, gates, and barriers; or reluctance to cross concrete or other “slippery” surfaces). These include cattle:
 - On the farm with a history of or exhibiting clinical signs of CNS disease;
 - Classified as rabies suspects (including rabies-negative cases from State or local public health laboratories); and
 - Condemned on antemortem inspection for CNS signs or rabies.

¹ Clinical suspects refer to cattle displaying behavioral or clinical signs consistent with BSE. Casualty (Emergency) slaughter refers to animals that are non-ambulatory, recumbent, unable to rise or walk without assistance, or “downers.” Fallen stock refers to animals that are found dead or killed on-farm or during transport or at slaughter.

- Cattle with signs consistent with CNS signs - cattle affected by illnesses that are refractory to treatment (including anorexia, loss of condition in spite of good appetite, pneumonia, and decreased milk yield) **and** are displaying progressive behavioral changes (including apprehension, nervousness, excitability, aggression, head shyness, hypermetria, kicking when milked, difficulty in rising, excessive nose scratching, or hesitation at gates/barriers).

B. Cattle of any breed that are 30 months old or older exhibiting certain nonspecific clinical signs

Certain cattle, other than those described in Section A above, are also valuable to targeted BSE surveillance efforts; however, samples should only be obtained from cattle **30 months old or older** (as evidenced by the eruption of at least one of the second set of permanent incisors). Categories of these targeted cattle include:

- Cattle condemned on antemortem at slaughter for **any reason other than CNS signs or rabies**.
- Non-ambulatory cattle that cannot rise from a recumbent position (i.e., disabled and/or downer) or that cannot walk including, but not limited to, those with broken appendages, severed tendons or ligaments, nerve paralysis, fractured vertebral columns, or metabolic conditions.
- Ambulatory cattle at slaughter exhibiting other clinical signs that may be associated with BSE:
 - Cattle that are severely weakened though they may be able to stand and walk for brief periods of time; and
 - Cattle that were euthanized, or that died as a result of moribund conditions, infectious diseases, emaciation, or injuries.
- Cattle found dead.
 - A **clinical history** should be obtained for these animals whenever possible.
 - Samples should not be collected from dead cattle with known cause of death and/or history that do not meet the criteria for targeted subpopulations (e.g., acute deaths from lightning strike or other acts of nature, fire, dystocia, hypothermia, trauma, etc.).

Collection Sites

Cattle in the targeted subpopulations described above may present at various locations. Thus, sample collection sites for the BSE Ongoing Surveillance Program include farms, public health and animal diagnostic laboratories, and rendering, 3D/4D, and slaughter establishments.

- **Slaughter Establishments.** Cattle **12 months old and older** condemned for CNS signs or rabies upon antemortem inspection will be sampled for BSE as described in Section A above. Additionally, cattle 30 months old or older that are condemned at antemortem inspection by the

Food Safety and Inspection Service (FSIS) are eligible for sample collection at designated offsite sample collection facilities (facilities contracted by VS to collect samples from cattle condemned at antemortem inspection). Most samples from cattle condemned on antemortem inspection will contribute to the second most valuable surveillance stream (i.e., casualty slaughter).

- **Rendering or 3D/4D facilities.** A limited number of samples will be collected from cattle 30 months old and older presented to rendering or 3D/4D facilities. Sample collection at these sites should only occur according to provisions of competitive contracts awarded by VS. These sites typically include cattle from a wide variety of sources, and samples collected at these sites will represent the “fallen stock” surveillance stream. Note: For cattle sampled at these locations, the collection of a clinical history is highly desirable.
- **On-Farm.** Samples from cattle 12 months old and older may be collected by accredited veterinarians, Federal or State employees (including animal health technicians and/or contractors), or VS-approved dead stock haulers. Under VS Area Office oversight, sample collectors with other qualifications may be enlisted when resources preclude the participation of aforementioned sample collectors in a given area. Such samples are usually accompanied by significant historical information pertaining to clinical signs, and are generally of high value to surveillance.
- **Public Health Laboratories.** All samples from cattle 12 months old and older that are rabies suspects and test negative for rabies will be submitted to a designated laboratory (Table 1) for BSE testing by public health laboratory personnel. All samples derived from this data source can be characterized as clinically suspicious for BSE and thus are of high value for surveillance.
- **Veterinary Diagnostic Laboratories.** Cattle 12 months old and older that are submitted for necropsy, or fresh whole brainstems submitted for ancillary diagnostics to veterinary diagnostic laboratories, including laboratories other than VS BSE contract laboratories, should be sampled by laboratory personnel. Such samples are usually accompanied by significant historical information pertaining to clinical signs, and thus are of high value to surveillance.
- **Facilities contracted by VS to collect samples from cattle condemned at antemortem inspection (i.e., offsite collection facilities).** Samples derived from cattle 12 months old and older presented for slaughter and condemned at antemortem inspection by FSIS may be collected by Animal and Plant Health Inspection Service (APHIS) employees (including animal health technicians and/or contractors) at an APHIS-approved, offsite collection facility. Under these circumstances, communication of animal identification information (including FSIS condemnation tag number, i.e., the “Z tag”), clinical history, and condemnation codes from the slaughter facility to the contracted facility is imperative.

Personal Safety

If BSE is transmissible to humans in the occupational setting, the most likely routes would be through contact with infective tissues through wounds or open lesions on the skin, contact with mucous membranes (eyes and mouth), or in exceptional cases, by swallowing. Transmission by the airborne route (i.e., by the inhalation of infectious airborne particles) is considered to be the least likely route of exposure. The only tissues that have shown infectivity in naturally infected cattle are the brain, retina, spinal cord, nictitating membrane, and a limited number of other tissues such as peripheral nerves. In experimentally (orally) infected cattle, the distal ileum, dorsal root ganglia, trigeminal ganglia, palatine tonsil, and a limited number of other tissues has also shown infectivity, the majority of these at end stage disease.

Because rabies, listeriosis, and other possible zoonotic diseases must be included in the differential diagnosis, brain and spinal cord collection from cattle with CNS clinical signs should be done carefully. The following precautions are generally applicable:

- Adhere to safe working practices and take extra precautions to avoid or minimize the use of tools and equipment likely to cause cuts, abrasions, or puncture wounds;
- Where use of such equipment is unavoidable, wear suitable protective clothing, which includes disposable coveralls, aprons, heavy gloves, and boots;
- Cover existing cuts, abrasions, and skin lesions on exposed skin with waterproof dressings;
- Use face protection to protect the mucous membranes of the eye, nose, and mouth from exposure to infective droplets or tissue fragments;
- Take steps to avoid the creation of aerosols and dusts when engaged in activities such as sawing through the skull bones;
- Wash hands and exposed skin before eating, drinking, smoking, taking medication, using the telephone, or going to the toilet; and
- Wash and disinfect protective clothing and instruments thoroughly after use.

Additional guidance for APHIS VS employees concerning personal safety is available in the APHIS Safety, Health, and Wellness Manual

(https://www.aphis.usda.gov/aphis/resources/manualsandguidelines/ct_manuals_guidelines_main).

Detailed Sampling Procedures

Tools needed

- Knife and scissors (Figure 1)
- Brain sampling spoon or other suitable device (Figure 1)
- Forceps (Figure 1)
- Screw-top plastic tubes (50ml) (Figure 2)
- Fine point permanent marker
- Ball-point pen
- Pan or bucket for disinfecting instruments and rinsing gloved hands
- Bleach (disinfectant)
- Paper towels
- Trash bags
- Supply of BSE mailers including frozen cold packs
- May need scabbard, a steel, and personal protective equipment



Figure 1: Tools include a knife, scissors, brain sampling spoon, and forceps

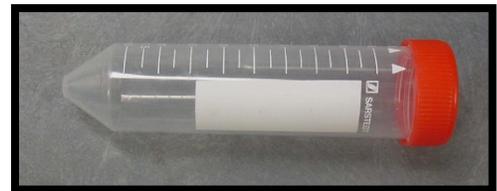
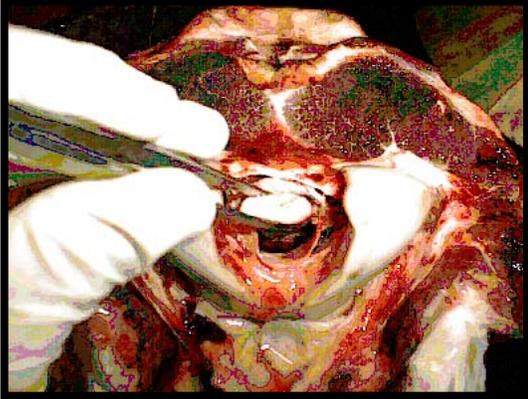
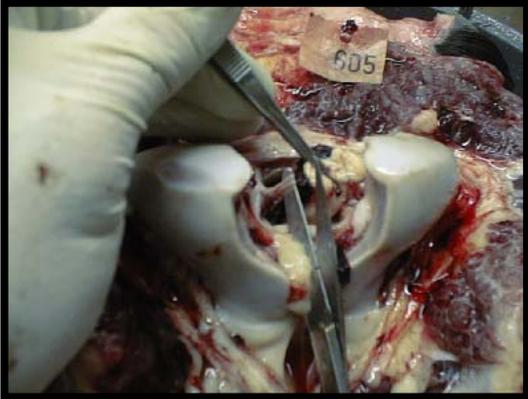


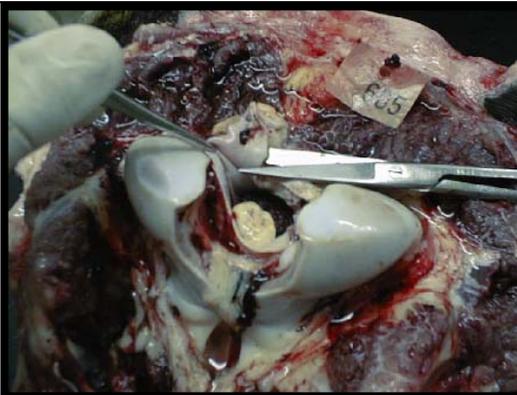
Figure 2: 50 mL plastic screw-top tube

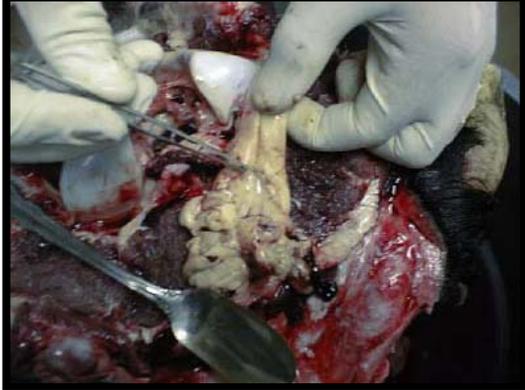
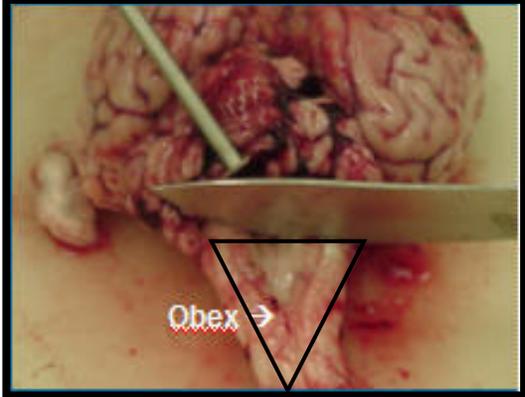
Getting a sample of sufficient quality

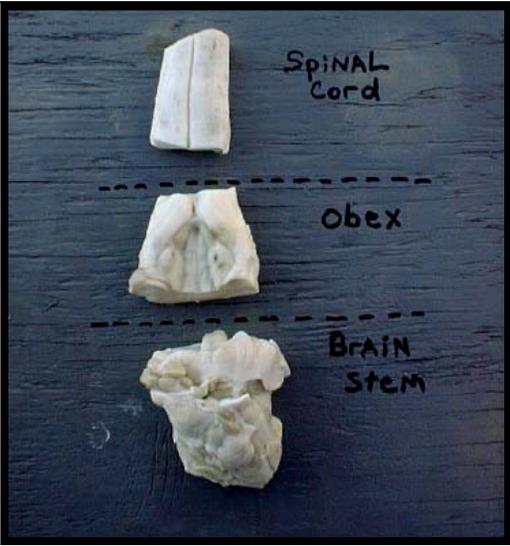
Only samples collected from animals in the targeted subpopulation (as described above) and with a valid test result reported are considered to be valid samples in the BSE Ongoing Surveillance Program. “Not detected/Not obex” or “Not tested” are not considered valid test results in the context of the BSE Ongoing Surveillance Program. In order for a sample to be tested, the appropriate brainstem sample, including obex, must be submitted with little contamination or postmortem decomposition. Samples that are taken from the wrong location or that are significantly autolyzed are not testable and should not be submitted. However, samples should be collected and submitted from all cattle condemned by FSIS upon antemortem inspection for CNS signs and rabies and all cattle that are highly suspicious for BSE, regardless of the apparent tissue quality.

BSE sampling using a brain sampling spoon

<p>Step 1</p>	<p>Place head upright on a head rack or barrel, the table edge, or on the ground facing down, if no other option is feasible.</p>	 <p>Step 1: Positioning the head</p>
<p>Step 2</p>	<p>Grasp the brainstem with forceps, using light pressure so that the tissue is not damaged.</p>	 <p>Step 2: Grasping the brainstem</p>
<p>Step 3</p>	<p>Cut the dura mater (tough fibrous membrane) along the dorsal (top) midline to expose the brainstem and cut the cranial nerves, present on the lateral (sides) aspects of the brainstem, to allow for better mobility within the foramen and subsequent removal.</p> <p>Cut the cranial nerves on the sides. Do not cut into the brainstem! Failure to sever cranial nerves is a common cause of damaged samples.</p>	 <p>Step 3: Cutting the dura mater and the cranial nerves</p>

<p>Step 4</p>	<p>With forceps and scissors, remove as much dura mater as possible. Dura mater removal allows better visualization and may aid proper sample removal.</p>	 <p>Step 4: Removing dura mater to visualize the spinal cord</p>
<p>Step 5</p>	<p>With light pressure, use the forceps to hold the brainstem against the ventral part of the foramen magnum.</p> <p>Insert the brain sampling spoon (inverted) on the dorsal part of the brainstem to sever the cerebellar attachments to the brainstem.</p> <p>Remove the spoon.</p>	 <p>Step 5: Severing the cerebellar attachments to the rostral brainstem with a brain sampling spoon</p>
<p>Step 6</p>	<p>With the forceps, lift the brainstem dorsally and reinsert the brain sampling spoon along the ventral surface of the spinal cord.</p> <p>Lower the handle of the spoon, elevating the leading edge of the spoon, to sever the rostral brainstem. Depending on the size of the spoon and the animal being sampled, this may need to be repeated, directing the leading edge laterally left and right.</p> <p>With constant pressure, gently remove the spoon and accompanying brainstem through the foramen. If the sample</p>	 <p>Step 6: Severing the rostral brainstem with a brain sampling spoon</p>

	<p>does not come freely with the spoon, ensure the cranial nerves are completely severed along the lateral brainstem and repeat steps 5 and 6. Forcing removal of the sample can result in its mutilation and an invalid test result.</p>	
<p>Step 7</p>	<p>Complete the removal of the sample from the foramen.</p> <p>Gently clean off excess blood.</p>	 <p>Step 7: Removal of the sample</p>
<p>Step 8</p>	<p>Identify the obex area of the brainstem.</p> <p>The obex, where the 4th ventricle transitions to the central canal of the spinal cord, includes the dorsal motor nucleus of the vagus (DMNV), which MUST be collected in order for the sample to be counted as a valid sample in the BSE Ongoing Surveillance Program. The triangle in the figure to the right demonstrates the location of the DMNV, the pink area on the dorsal midline at the obex, and is the portion examined in the laboratory. The arrow identifies the “V” at the level of the obex.</p>	 <p>Step 8: Identification of the obex</p>

<p>Step 9</p>	<p>Cut the sample as pictured. The middle piece of tissue contains the obex and the DMNV.</p> <p>Remember: THE OBEX IS THE DESIRED AREA.</p>	 <p>The image shows three pieces of white tissue on a dark blue background. The top piece is labeled 'Spinal Cord'. The middle piece is labeled 'obex' and is flanked by two horizontal dashed lines. The bottom piece is labeled 'Brain Stem'.</p> <p>Step 9: Sections of the tissue sample</p>
<p>Step 10</p>	<p>Remember the sample will be FRESH tissue; NO FORMALIN. Do not FREEZE samples unless advised to do so by the National Veterinary Services Laboratories (NVSL).</p> <p>Place the obex in the supplied 50 ml screw top tube.</p> <p>Label the sample tube with: Sample number (ex: 1, 2, 3, 4) and Barcode ID label.</p> <p>Cattle highly suspicious for BSE should have their entire brain submitted after rabies testing, if possible. The entire brainstem can be submitted fresh, with the remaining brain being split along the midline and submitted half fresh and half fixed. Contact NVSL for further instructions.</p> <p>Dispose of un-submitted tissue with carcass.</p>	 <p>The image shows a hand using a metal instrument to place a small, yellowish, gelatinous piece of tissue (the obex) into a clear plastic screw-top tube. A red cap is visible to the right of the tube.</p> <p>Step 10: Obex placed in screw top tube</p>

Packaging and Shipping Samples

It is important that samples are submitted to the testing laboratory as quickly as possible in order to minimize time between sample collection and processing. Samples should be shipped on the same day as they are collected. Samples should not be saved or batched for shipping at a later date as this increases the time between sample collection and carcass identification, including DNA matching.

Samples should be shipped chilled or refrigerated. Freezing of samples should be kept to a minimum. Proper recognition of the brainstem, particularly the obex, is adversely affected by repeated freeze/thaw cycles. Lack of identification of the obex, results in a “**Not detected/Not obex**” diagnosis when tested. This means the laboratory did not detect the abnormal prion, but they are not certain that the correct region was tested. This is why it is very important to submit intact and recognizable tissues when shipping samples for BSE testing.

Packaging materials

The National Veterinary Services Laboratories (NVSL) provides all the supplies needed for collection and shipping (including an approved shipping box) as a “BSE kit.” These kits include:

- Approved shipping box;
- Sample tubes (Kits of 5, 10, or 25 tubes are available through NVSL. See hyperlink below.);
- Plastic bag or zip-type bag in which to place sample tubes;
- Barcode ID label;
- USDA BSE Surveillance Submission Form (**Attachment B: VS Form 17-146**);
- USDA BSE Surveillance Submission Form Continuation (**Attachment C: VS Form 17-146A**);
- USDA BSE Surveillance Data Collection Form (**Attachment D: VS Form 17-131**);
- Absorbent material;
- Ice packs;
- Biohazard bags (1 or 2) to comply with the International Air Transport Association (IATA) shipping regulations (**Attachment E: IATA 650 Instructions**); and
- Labels for shipping regulations compliance (e.g., air eligible, IATA statement, UN 3373, Keep from heat/freezing, Animal Diagnostic Specimen).

To request additional “BSE kits” or for further assistance with shipping, you may [visit here](#) or contact the NVSL shipping department at:

National Veterinary Services Laboratories
1920 Dayton Avenue
Ames, IA 50010
Phone: (515) 337-7530

Fax: (515) 337-7378

E-mail: NVSLShipping@usda.gov

Packing and shipping

1. Place labeled sample tubes into the plastic bag with absorbent material;
2. Place plastic bag into the clear biohazard bag (STP-741) and seal;
3. Place this bag into the white biohazard bag (STP-740) and seal;
4. Place the white biohazard bag (STP-740) into your shipping box;
5. Place frozen ice packs on top of the white biohazard bag (STP-740) and cover with inner Styrofoam lid;
6. Place a copy of the completed USDA BSE Surveillance Submission Form ([VS 17-146](#)) and USDA BSE Surveillance Data Collection Form ([VS 17-131](#)) on top of inner Styrofoam lid;
7. Seal box;
8. Apply the overnight shipping label to the box addressed to the appropriate laboratory conducting BSE testing (Table 1);
9. Apply the other required shipping labels to the box; and
10. Ship by overnight delivery with the Federal contract service. If shipping on a Friday, be sure to mark/label box for Saturday delivery.

Note: Individuals who ship surveillance samples to laboratories are responsible for meeting requirements for the shipment of biological substances. At a minimum, these individuals should be familiar with the IATA Packing Instructions (**Attachment E: IATA 650 Instructions**).

Rabies-negative samples

Rabies-negative samples should be submitted for BSE testing within 10-14 days of collection. If they cannot be submitted within 5-7 days (in refrigerated/chilled conditions), then they can be frozen for approximately another week. These timeframes have to do with the condition of the tissues, as the brain is quite sensitive to autolysis. Public health labs require the entire fresh brain for rabies testing. Their ideal transit time (collection to testing) should be less than 48 hours. (Refrigeration preserves the sample for “at least 48 hours.”) The surveillance samples that the labs receive are commonly tested 3-4 days post collection and generally arrive in acceptable condition, having been chilled nearly that entire time.

Designated Laboratories for BSE Sample Submission

Sample collectors will submit fresh tissue samples to the designated laboratories listed here unless otherwise directed by NVSL.

Table 1: Designated laboratories for BSE sample submission

State where sample was collected	Designated Laboratory
Alabama, Arizona, Colorado, Florida, Kansas, Montana, North Carolina, North Dakota, Nebraska, Utah, Wyoming	Colorado State University Veterinary Diagnostic Laboratory 2450 Gillette Drive Fort Collins, CO 80526 (970) 297-1281
Arkansas, Connecticut, Delaware, Georgia, Illinois, Louisiana, Maine, Maryland, Massachusetts, , , Missouri, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont Virginia, , West Virginia	Athens Veterinary Diagnostic Laboratory 501 DW Books Drive University of George Athens, GA 30602 (706) 542-5568
Idaho and others as requested or redirected	USDA, APHIS, VS National Veterinary Services Laboratories (NVSL) 1920 Dayton Avenue Ames, IA 50010 (515) 337-7526
Alaska, California, Hawaii, Iowa, Kentucky, Minnesota, Nevada, New Mexico, , Oregon, South Dakota, Washington	Washington Animal Disease Diagnostic Laboratory Bustad Hall, Room 155-N Pullman, WA 99164 (509) 335-9696
Indiana, Michigan, Mississippi, Texas, Wisconsin	Wisconsin Veterinary Diagnostic Laboratory University of Wisconsin – Madison 445 Easterday Lane Madison, WI 53706 (608) 262-5432

Proper Communication for Submitting Samples

It is essential to have secure and reliable communication among the individuals responsible for sample collection at collection locations, the establishment’s management, and NVSL or designated laboratories. Communication guidelines are as follows:

- The sample submitter will notify the appropriate laboratory of incoming samples via fax, telephone, e-mail, or any other approved electronic method (including the Veterinary Services Laboratory Submission (VSLS) System), unless otherwise instructed by that laboratory.
- The information to be communicated should include the overnight contract delivery service tracking number, the collection site name and address, the unique Referral Number of the submission, and the number of samples.

- Sample submitters must accurately record all relevant information on the current versions of the USDA BSE Surveillance Submission Form ([VS 17-146](#)), USDA BSE Surveillance Submission Continuation Form (if used), and on each of the USDA BSE Surveillance Data Collection Forms ([VS 17-131](#)). See the section “Instructions for Completing the BSE Surveillance Forms” in this Procedures Manual for more details.
 - Enter this information on the electronic version of these forms – either on a tablet PC or via the Web-based VSLS System. If electronic entry is unavailable, complete the forms by hand and submit for data entry as instructed by the VS Area Office.
 - Print a copy of the completed BSE Surveillance Submission Form, BSE Surveillance Submission Continuation Form (if used), and each BSE Surveillance Data Collection Form to accompany the samples shipped to the designated laboratory.
 - Prepare four additional copies of these completed forms for further distribution and filing (i.e., one retained by the submitter, one for the collection site, one for the VS Area Office, and one to be maintained with the animal identification devices).
 - FSIS personnel sampling cattle condemned on antemortem inspection for CNS signs or rabies as part of the BSE Ongoing Surveillance Program should also complete the forms and either enter data directly into the VSLS System or forward the completed forms to the appropriate VS Area Office by fax or e-mail.
- The sample submitter should verify via the overnight contract delivery service tracking system that the submission has been delivered to the designated laboratory. If the sample does not arrive as expected, the sample submitter should work with the delivery service to track the location and delivery status of the sample.

Animal Identification

The collector should maintain the identity of cattle tested as part of the BSE Ongoing Surveillance Program throughout the entire sample collection, submission, and testing process. If testing should confirm an animal was infected with BSE, the animal’s identification will allow VS personnel to **trace its origin**.

Record **ALL** types of animal identification devices, brands, and tattoos associated with the sampled animal on the current version of the BSE Surveillance Data Collection Form and enter this information in the VSLS – BSE Module. These identification devices may remain intact on the carcass or may be collected along with an attached piece of ear tissue (at least dime-sized – 1.8 cm) in a **labeled** bag and **maintained** until test results are received for the animal. When appropriate, obtain digital pictures or drawings of brands and/or collect tissue containing the tattoo. If several animals with no identification are sampled from the same premises, an official ID may be applied in order to differentiate carcasses after testing. Use the best method to ensure that the carcass can be located if the test result is positive.

Reporting of Laboratory Results

When tests are completed and all animals tested in the lot are reported as rapid screening test “Not Detected” (i.e., “negative”), the designated laboratories will report rapid screening test results back to the sample submitter, the Area Veterinarian in Charge (AVIC), and State Veterinarian. If requested, results will also be transmitted to the appropriate management at the collection site.

The designated laboratories will report any “initial inconclusive” results to NVSL. Contact attempts should be made in the following order until contact with NVSL is made: the NVSL Director, the NVSL Associate Director, Diagnostic Bacteriology and Pathology Laboratory Director, or Head of Pathology Section (designated laboratories will be provided with a phone list along with the standard operating procedure for performing BSE testing). No other contacts or reporting of test results from that lot are to be made until the repeat testing has been completed. If either of the repeat tests is above the negative cut off, then the screening test is considered to be “Inconclusive.”

If test results for any of the animals in the lot are inconclusive, the testing laboratory’s Director will first report the findings to the Director of the NVSL. In addition, the testing laboratory’s Director shall also notify the AVIC and State Veterinarian in the State in which the sample was collected and/or the State where the carcass is being held pending test results. The information reported shall specify which carcass(es) tested inconclusive. The AVIC will report results for the entire lot of samples to the submitter only after the VS Deputy Administrator’s Office or District Director has given permission to release such information. A decision to hold or dispose of the carcass(es) pending confirmatory testing should be made with the concurrence of the AVIC.

All samples with inconclusive results must be immediately forwarded to the NVSL, with prior notification and confirmation of arrival. All confirmatory test results will be transmitted directly to the VS Area Office. The AVIC will contact the sample collector and the facility where the sample was collected so that carcass disposal can be coordinated and verified.

Instructions for Completing the BSE Surveillance Forms

General Instructions

Subsequent to sample collection, the collector must thoroughly and accurately complete the current versions of the USDA BSE Surveillance Forms to ensure proper documentation, data entry, and submission of information concerning the samples tested for BSE. This information is necessary to assign samples to the appropriate OIE surveillance stream and, thus, determines the epidemiologic value of each sample to the BSE Ongoing Surveillance Program.

The versions of USDA BSE Surveillance Forms currently in use are:

- USDA BSE Surveillance Submission Form (**Attachment B: VS Form 17-146**)

- USDA BSE Surveillance Submission Continuation Form (**Attachment C: VS Form 17-146A**)
- USDA BSE Surveillance Data Collection Form (**Attachment D: VS Form 17-131**)

Examples of the forms are included as Attachment B, Attachment C, and Attachment D of this Manual. Copies of the forms are available for downloading at:

https://www.aphis.usda.gov/aphis/resources/forms/ct_vs_forms

There are two methods for electronically submitting this information: via the BSE VSLS Webpage or via tablet PCs at high-volume collection sites. The BSE VSLS Web page is used for entering and transmitting data from handwritten USDA BSE Surveillance Submission Forms. This system requires an APHIS-assigned log-in and password to enter information about each sample prior to shipping the sample to the designated laboratory. After electronically entering and submitting the information, the data are then stored with the National Animal Health Laboratory Network in a USDA database.

A Quick Start Guide for using the Web-based forms is available on the VSLS Website after user log-in. The Quick Start Guide is included as **Attachment G** in this manual.

If electronic entry is unavailable, handwritten forms are submitted as instructed by the VS Area Office.

Instructions for completing USDA BSE Surveillance Submission Form: VS Form 17-146

Note: A separate submission form must be completed for each collector, collection site, and collection date combination.

Collection Site Type: Mark type of location at which the sample(s) was collected. Collection Site Types are described on pages 7 and 8 of this manual. If the Collection Site Type does not fit those described in this manual, indicate “Other” and describe the site type. If a collector obtains samples from more than one site type, a separate submission form must be used for each set of samples from each site type.

Testing Laboratory Use Only (Accession or Identification Number): This section is reserved for the testing laboratory use only. Only laboratories should mark in this area.

BSE Referral Number: The BSE Referral Number must be recorded at the top of each Data Collection Form. The number must be a unique identifier for the submission that will not be duplicated in any other BSE surveillance submission. The BSE Referral Number is used to associate the BSE Surveillance Submission Form to the BSE Surveillance Data Collection Form in the database.

Manually enter a number that uniquely identifies a lab submission using the following recommended format:

- First two characters indicate the State code: e.g., CO for Colorado, or WA for Washington;

- Next two to three characters are the collector's initials: First, Middle (if applicable), Last;
- Next eight characters are the collection date in the MMDDYYYY format: e.g., 04072007 (April 7, 2007); and
- The last character is a letter to distinguish between multiple submissions/shipments on the same day: A = First, B = Second, etc. (Explained in simple terms, one letter per each shipped box).

Example 1. COSAJ06012006A

Translates to: Colorado – Steven Allen Jones – June 1, 2006 – first submission of the day.

Example 2. COSAJ06012006B

Translates to: Colorado – Steven Allen Jones – June 1, 2006 - second submission by Steven Allen Jones for that day, either from the same collection site or a different collection site.

Collection Site: Ensure that the National Premises Identification Number (if available for the Collection Site) or the FSIS Establishment Number where the sample was collected is entered. Enter all the requested data for the Collection Site. If samples are collected from more than one site, a separate submission form must be used for each Collection Site.

Collected By: Enter all the information requested for the person that actually collected the tissue sample for submission to the testing laboratory. If the Collector is the same as the Submitter, it is only necessary to check the indicated box.

Submitted By: Enter all the information requested for the person submitting the sample to the laboratory. If the samples are being submitted to the NVSL and the Submitter has an NVSL Submitter ID, please provide it.

Sample Information: Enter the total number of samples that are included with the submission in the appropriate space. In addition, check whether the preservation method for shipping is “ice pack” or “other.” If “other” is checked, enter the preservation method in the “Additional Data” field at the bottom of the form.

BSE Sample ID: Attach a sample ID barcode label for each sample submitted with this form. Barcodes are available in the sample kits or can be ordered from NVSL using the following e-mail address: nvslshipping@aphis.usda.gov.

If barcodes are not available at the time of sample collection, the VS Area Office should be contacted so that barcodes can be assigned for the submission. The number of barcodes should equal the number of samples for the submission.

Additional Data: Enter any additional information about the submission.

Collection Date: Enter the date the samples were collected. All samples on one form must be collected on the same day. (Use the MM/DD/YYYY format.)

Shipping Date: Enter the date the samples were shipped to the laboratory. (Use the MM/DD/YYYY format.)

Destination Lab: Enter the name of the Laboratory (or the Laboratory ID) where the samples are being sent for diagnostic testing.

Signature of Submitter: Submitter must sign the form.

Condition: For laboratory use only.

Distribution: For laboratory use only.

Received By: For laboratory use only.

Received Date: For laboratory use only.

Shipment Tracking No.: Enter the Airbill/Shipment Tracking Number for the package being sent to the diagnostic laboratory.

Instructions for completing USDA BSE Surveillance Submission Continuation Form: VS Form 17-146 A

Note: The paper version of the BSE Surveillance Submission Form has space to indicate the identification numbers for 20 animals. If additional animals are sampled, a BSE Surveillance Submission Continuation Form listing the unique identification numbers for each additional animal should also be submitted.

BSE Referral Number: Enter the referral number from the BSE Surveillance Submission Form.

BSE Sample ID: Place the barcode assigned to the sample in this box.

Additional Data: Enter any additional information about the submission.

Signature of Submitter: Submitter must sign the form.

Instructions for completing USDA BSE Surveillance Data Collection Form: VS Form 17-131

Note: A separate data collection form must be completed for each sample collected.

Collection Date: Enter the date the sample was collected. This date should match the collection date on the BSE Surveillance Submission Form. (Use the MM/DD/YYYY format.)

BSE Referral Number: Enter the referral number from the BSE Surveillance Submission Form, which must accompany this data collection form.

BSE Sample ID: Place the barcode assigned to the sample in this box. The barcode should correspond to the barcode on the accompanying BSE Surveillance Submission Form for that sample.

Primary Reason for Submission: Use professional judgment to select the one choice that best describes the primary reason this sample is being taken. If more than one reason for submission is applicable, check the primary reason for submission on the data collection form with the smallest number that applies.

- “Highly suspicious for BSE” if the animal being sampled is demonstrating clinical signs of, or has a clinical history consistent with, the definition of “highly suspicious for BSE” as described in VS Guidance Document 7800.1.
- “FSIS, antemortem condemned cattle” for animals that are condemned by FSIS personnel prior to slaughter and are sampled at the slaughter plant or at an offsite collection facility. (Note: If “FSIS, antemortem condemned cattle” is selected, an FSIS Condemnation Code must also be selected at bottom of form.)
- “Rabies suspect” for all animals that were initially identified for testing for rabies because of clinical signs or clinical history as described in VS Guidance Document 7800.1.
Note: If the animal was condemned by FSIS on antemortem inspection for rabies, the primary reason for submission is “FSIS, CNS antemortem condemned cattle.”
- “CNS signs” if the animal is being sampled because it has central nervous system signs consistent with primary CNS disease, but does not meet all the criteria for the “Highly suspicious for BSE” category.
Note: If the animal was condemned by FSIS on antemortem inspection for CNS signs, the primary reason for submission is “FSIS, CNS antemortem condemned cattle.”
- “Non-ambulatory/Disabled/Downer” if the animal is being sampled primarily because it is non-ambulatory, periodically or continuously.
Note: If the animal was condemned by FSIS on antemortem inspection as non-ambulatory, the primary reason for submission is “FSIS, antemortem condemned cattle” and a condemnation code of “Non-ambulatory 445” is assigned to the animal.

- “Other clinical signs that may be associated with BSE” if the animal is being sampled because it has demonstrated clinical signs that may be consistent with BSE, such as emaciation, tetanus (tetany), or injuries.
- “Dead” if the available history only indicates that the animal is dead with none of the preceding conditions as described above.

Note: If the animal is dead AND an FSIS antemortem condemned animal, the primary reason for submission is “FSIS, antemortem condemned cattle” and a condemnation code of “Dead 603” is assigned to the animal.

Individual who determined primary reason and clinical signs: Select (check) one box for the individual who determined the primary reason for this submission and the clinical signs for the animal identified on this form. If “Other” is selected, describe this individual on the line provided on the form.

Owner Information: Enter as much information as is known for the premises on which the sampled animal *last resided or was held*. At a minimum, the State or country is required.

Slaughter Site: Mark the box if the slaughter site is the same as the collection site; otherwise, enter all the requested information on the slaughter site. Be sure to enter the FSIS Establishment Number or the National Premises Identification Number (if available). Leave this section blank for non-slaughter animal samples.

Animal Information: Enter all information as requested.

Breed (If known): Enter the apparent breed of the animal. If unknown, check either “Beef breed” or “Dairy breed.”

Primary colors: Enter the animal’s primary color(s).

Age: Enter the animal’s age as the number of months or the number of years (in whole numbers only). For instance, if the animal is 2 ½ years old, enter 30 months. If purebred records or other official sources of age are used as the source of the animal’s age, check the “Recorded” box. Otherwise, indicate that the age was estimated by checking the “Estimated” box.

Dentition: Examine the animal’s mouth to determine if at least one of the 2nd incisors has erupted. If so, check the “Yes” box.

Gender: Check the appropriate box: “Male,” “Female,” or “Unknown.”

Neutered: Check the appropriate box: “Yes,” “No,” or “Unknown.”

Country of Origin: If it is known that the animal originated from a country other than the United States, write the name of the country in the space provided.

Animal ID Information: In the appropriate boxes, enter ALL types of animal identification devices, brands, and tattoos associated with the sampled animal.

- Be sure to include the FSIS Condemnation Tag (“**Z-tag**” number) of FSIS-condemned animals.
- If the animal is branded with either a hot iron brand or freeze brand, describe that brand to the best of your ability. For example, write “Circle Bar T” in the appropriate box.

Detailed instructions for specific types of animal identification devices follow.

- **General:**

- All alpha characters (letters) should be recorded in upper case (capitalized).
- Substitute an underscore (_) without additional spaces, for each unreadable number/character in the identification.
- If more than two official identifications of the same type are available, enter the additional information in one of the “Other ID” boxes and label accordingly.
- When entering Animal ID for other than “Official” tags, be sure to indicate the color of the Animal ID tag, if applicable. Indicate the color for tags other than “Official” tags, if applicable, as follows:
- Begin the Tag ID with the single capitalized letter indicating the color:

Capital Letter	Color	Capital Letter	Color
Y	yellow	R	red
G	green	W	white
B	blue	O	orange
L	lavender (purple)	P	pink
T	tan (brown)	S	silver
K	black	A	gray

- Include an underscore (_) between the color-designating letter and the alphanumeric sequence of the tag.
- Record whatever is written or printed on the tags.
- For two-colored tags, designate the major color in the database but include both colors on the paperwork. Example: A yellow plastic bangle tag with the number 25 is “Y_25.”



- Each identification field referenced on the electronic forms is limited to 15 alpha/numeric characters. If additional space is needed to record additional tag numbers, enter the information on Line 10, “Additional Data/Comments” on VS Form 17-131, BSE Data Collection Form.

- **Official USDA Tags:**

- USDA bright metal eartags, brucellosis vaccination eartags, Animal Identification Number (AIN) eartags, and bangle eartags (official identification tags have the US shield stamped on them):



Note: Back tags can be used in lieu of Official ID on an animal at slaughter. These tags should be recorded along with any other tags including official ID.

- Enter the identification information in the appropriate box.
- No color indication is required.
- Enter up to two identifications, one in each of the appropriate boxes.
- If there are more than two official identifications of the same type, enter the additional information in one of the “Other ID” boxes and label accordingly.
- **FSIS Condemnation (“Z”) Tags:**
 - Enter the number on the **FSIS condemnation tag** next to the “**Z**” prefix in the box.
 - When entering the FSIS condemnation tag electronically, include the “**Z**” prefix with the number. **Do not include a hyphen (-) after the “Z.”**
- **Owner Eartag #:**
 - Enter information present on the Owner Eartag in the appropriate box.
 - Indicate the color of the tag using the color code listed above, followed by the tag number.
- **Collection Site Tracking #:**
 - Enter the Collection Site Tracking Number in the appropriate box.
- **Slaughter Tracking #:**
 - Enter the Slaughter Tracking Number in the appropriate box.
- **Back Tag #:**
 - Enter the Back Tag Number in the appropriate box.
- **Microchip #:**
 - Enter the Microchip Number in the appropriate box.
- **Other ID Type #:**

- Flop Tag: Indicate the color of the tag, if applicable.
- Brands: Describe the brand, to the extent possible, and indicate the location of the brand on the animal.
Note: The electronic data entry form will only accept 15 characters. If you need more than 15 characters to describe the brand, indicate on the electronic data entry form to refer to the paper form for a complete description of the brand.
- Tattoos: Indicate which ear (R = right, L = left) or other location on the animal was tattooed and include all alpha/numeric characters.

Clinical Signs: Check all that apply. **At least one clinical sign must be checked.** Be thorough and complete. Obtain information directly from on-site farm personnel whenever possible. The subtle and nonspecific nature of behavioral changes associated with BSE are best identified by those who handle cattle on a daily basis, and on-farm personnel are the best source of this information. Use professional judgment in box selection and ensure that contradictory signs are not checked. If “Other” is checked, be sure to indicate that clinical sign in the “Comments” section at the bottom of the page.

For clinical signs checked within the black-bordered box on the left-hand side of the form, check whether the condition was progressive and whether the condition did not respond to treatment (“Yes,” “No,” “Don’t Know”). (If the condition did not respond to treatment, the appropriate response is “Yes;” if the condition did respond to treatment the appropriate response is “No.”)

Note: Apprehension, ataxia, and hyperesthesia are the three most typical signs of BSE. These are identified in the vast majority of animals that are histopathologically confirmed BSE cases. The key is to identify an animal with progressive behavioral changes or conditions that are refractory to treatment. Many BSE cases are unresponsive to treatment, showing non-specific conditions such as the loss of body condition despite good appetite (weight loss), pneumonia, and decreased milk production.

Table 2: Clinical signs commonly identified in BSE-positive animals

Apprehension (Increased fearfulness)	Ataxia (Lack of coordination)	Hyperesthesia (Excessive sensitivity to sound and touch)
Increased aggressive or belligerent behavior to other cows and workers due to increased fear (head butting, charging, pawing, stamping on the ground)	Shortened strides	General muscle and head tremors
Increased resistance to handling	Swaying gait	Head shyness and ear shifting (head bobbing, head tossing)
Increased hesitation at doors, gates, and barriers (i.e., reluctance to cross concrete or other “slippery” surfaces)	Difficulty in negotiating turns	Rhythmic and involuntary movement of the eyeballs (nystagmus)
Head pressing/rubbing, circling	Knuckling, stumbling, slipping or	Sensitivity to light

	falling with subsequent difficulty in rising	
Hyper-excitability or nervousness; may kick repeatedly during milking (when did not before)	'Dog sitting'	Excessive or prolonged episodes of grooming and licking (nose licking, nose wrinkling, snorting, yawning, sneezing, and coughing)
Separation from the herd because animals have become fearful of their herd-mates or environment	Hypermetria	Bruxism (teeth grinding)
Dullness over prolonged periods	Progressive weakness Recumbency/paralysis	Excessive bellowing (vocalization) Sudden jerking movements of head, limbs, or other body parts to loud sounds (spontaneous startle responses)
	Abnormal head carriage, droopy lips or eyelids	

FSIS Condemnation Codes: Enter the appropriate antemortem condemnation code. One box must be checked **if and only if** "FSIS, antemortem condemned cattle" has been selected as "Primary Reason for Submission" on the form.

Comments: Include any additional relevant information about the sample in this box.

Humane Handling of Livestock

Handling procedures and euthanasia for targeted animals tested as part of the BSE Ongoing Surveillance Program must comply with applicable local, State, and Federal laws, regulations, and policies, and local and professional standards for humane handling and euthanasia of livestock.

Transportation and Disposal of Carcasses

Procedures for the transportation and disposal of animal carcasses, parts of dead animals, offal, and animal waste for targeted animals tested as part of the BSE Ongoing Surveillance Program should comply with local, State, and Federal laws, regulations, and policies, and local and professional standards, as well as the following general guidelines:

- Report domestic animals known to have died of a dangerous transmissible disease or reportable disease to the VS Area Office.
- Prevent contamination of the environment.
- Prevent exposure to other living animals and the public, including prohibiting the potential for uncooked and/or unprocessed animals, animal parts, or offal to be fed to domestic animals.
- Complete disposal within 48 hours after receipt of BSE test result.

All carcasses and offal from sampled animals that are intended for further processing must be held until laboratory test results are received. Furthermore, the identity of sampled carcasses and

associated offal must be documented and maintained throughout the entire sample collection, submission, and testing process until “Not Detected” (i.e., “negative”) test results are obtained. After obtaining “Not Detected” test results, carcasses and offal may be rendered or otherwise processed in accordance with applicable Federal laws, regulations, and policies.

Carcasses and offal from sampled animals that are not intended for further processing may be disposed of prior to receiving test results by:

- Burial in order to facilitate DNA matching of positive samples:
 - In an approved landfill, OR
 - On the farm of immediate origin, OR
 - On a composting pile.

Burial of sampled carcasses is preferred to other disposal methods.

Note: It is necessary to mark the location of carcass disposal in the event it needs to be exhumed. For landfill disposal, ensure the landfill management is advised of the marker.

- Rendering at a dedicated facility for non-animal feed use such as biofuel or cement;
- Incineration by fixed-facility incineration; OR

Note: Fixed-facility incineration takes place in a completely contained environment and is highly controlled. Fixed-facility incinerators are typically fueled by diesel, natural gas, or propane. Carcasses are reduced to inert ash.

- Alkaline digestion.

Hides of sampled animals do not require disposal and do not need to be held while awaiting test results.

If testing confirms that an animal was infected with BSE, previously buried carcasses may be exhumed. Disposal of carcasses and/or offal from sampled animals that have inconclusive or positive test results should also follow guidelines provided in the 2019 BSE Response Plan.

Attachment A: BSE Ongoing Surveillance Targeting Criteria Flowchart

Is the animal:

- **Highly suspicious for BSE**, or
- **A Rabies Suspect (Only BSE test after rabies negative test results.)**, or
- **Condemned on ante-mortem inspection for CNS signs**, or
- **Exhibiting CNS signs** attributable to primary CNS abnormality, but not highly suspicious for BSE?

If the answer to ANY one of these questions is "YES"

YES

If the answer to ALL of these questions is "NO"

NO

Collect BSE sample of any breed
12 MONTHS OLD OR OLDER

Is the animal:

- **Ante mortem condemned** (Other than CNS or rabies), or
- **Non-ambulatory/disabled/down**, or
- **Exhibiting other clinical signs** that may be associated with BSE, or
- **Dead**
 - On-farm source with clinical history, or
 - Contractor source with clinical history?

If the answer to ANY one of these questions is "YES"

YES

If the answer to ALL of these questions is "NO"

NO

Is the animal 30 months old or older, based on:

- The eruption of one of the 2nd incisors, or
- A recorded documentation of age?

Do NOT Collect BSE Sample

If the answer to EITHER one of these questions is "YES"

YES

If the answer to BOTH of these questions is "NO"

NO

Collect BSE sample

Do NOT Collect BSE Sample

For detailed sampling criteria descriptions, refer to VS Guidance Document 7800.1

Attachment B: USDA BSE Surveillance Submission Form (VS Form 17-146)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0409. The time required to complete this information collection is estimated to average .1 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB Approved
0579-0409
EXP.: 12/2020

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
NATIONAL VETERINARY SERVICES LABORATORIES
P.O. BOX 844, 1920 DAYTON AVENUE
AMES, IOWA 50010
515-337-7514

**BSE SURVEILLANCE
SUBMISSION FORM**

Page of

1. BSE Referral Number

2. SUBMITTED BY **3. COLLECTION SITE**

<p>Name (including Business Name) <input type="text"/> NVSL Submitter ID <input type="text"/></p> <p>Email <input type="text"/></p> <p>Phone <input type="text"/> Fax <input type="text"/></p> <p>Street <input type="text"/></p> <p>City <input type="text"/> State <input type="text"/> ZIP Code <input type="text"/></p>	<p>Premises ID (or Lat/Long) or FSIS Plant Number <input type="text"/></p> <p>Name (including Business Name) <input type="text"/></p> <p>Street <input type="text"/></p> <p>City <input type="text"/> State <input type="text"/> ZIP Code <input type="text"/></p> <p>Phone <input type="text"/> Fax <input type="text"/></p>
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Use separate submission form for each submitter, collector, collection site, and collection date combination. Attach a separate Bar Code Sticker (if available) for each sample in the spaces below. Attach a separate BSE Surveillance Data Collection Form (VS 17-131) for each animal. Sample IDs on this form match Sample IDs on BSE Surveillance Data Collection Forms.

6. COLLECTION SITE TYPE (select only one)

Slaughter Plant
 Public Health Lab
 Diagnostic Lab
 Renderer
 On Farm
 3D-4D
 Other (describe)

7. SAMPLE INFORMATION

Number of Samples

Preservation Ice Pack Other

4. COLLECTION DATE

8. COLLECTED BY or If Same as Submitted by

Name (including Business Name)

Street

City State ZIP Code

Phone Fax

Email

1 BSE Sample ID <input type="text"/>	5 BSE Sample ID <input type="text"/>	9 BSE Sample ID <input type="text"/>	13 BSE Sample ID <input type="text"/>
2 BSE Sample ID <input type="text"/>	6 BSE Sample ID <input type="text"/>	10 BSE Sample ID <input type="text"/>	14 BSE Sample ID <input type="text"/>
3 BSE Sample ID <input type="text"/>	7 BSE Sample ID <input type="text"/>	11 BSE Sample ID <input type="text"/>	15 BSE Sample ID <input type="text"/>
4 BSE Sample ID <input type="text"/>	8 BSE Sample ID <input type="text"/>	12 BSE Sample ID <input type="text"/>	16 BSE Sample ID <input type="text"/>

8. Additional Data (attach additional page(s) if needed)

9. Shipping Date <input type="text"/>	10. Signature of Submitter <input type="text"/>			Accession Number <input type="text"/>
11. Destination Lab <input type="text"/>	12. Shipment Tracking Number <input type="text"/>			
Condition Received <input type="text"/>	Distribution <input type="text"/>	Received by <input type="text"/>	Date Received <input type="text"/>	

Attachment C: USDA BSE Surveillance Submission Continuation Form (VS Form 17-146A)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0409. The time required to complete this information collection is estimated to average .1 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB Approved
0579-0409
EXP. 12/31/09

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE NATIONAL VETERINARY SERVICES LABORATORIES P.O. BOX 844, 1920 DAYTON AVENUE AMES, IOWA 50010 515-337-7514	BSE SURVEILLANCE SUBMISSION FORM	Page <input type="text"/> of <input type="text"/>	1. BSE Referral Number <input style="width: 100%;" type="text"/>
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2. SUBMITTED BY	3. COLLECTION SITE
Name (Including Business Name) <input style="width: 80%;" type="text"/> NVSL Submitter ID <input style="width: 20%;" type="text"/>	Premises ID (or Lat/Long) or FSIS Plant Number <input style="width: 100%;" type="text"/>
Email <input style="width: 100%;" type="text"/>	Name (Including Business Name) <input style="width: 100%;" type="text"/>
Phone <input style="width: 40%;" type="text"/> Fax <input style="width: 60%;" type="text"/>	Street <input style="width: 100%;" type="text"/>
Street <input style="width: 100%;" type="text"/>	City <input style="width: 40%;" type="text"/> State <input style="width: 15%;" type="text"/> ZIP Code <input style="width: 45%;" type="text"/>
City <input style="width: 30%;" type="text"/> State <input style="width: 15%;" type="text"/> ZIP Code <input style="width: 55%;" type="text"/>	Phone <input style="width: 40%;" type="text"/> Fax <input style="width: 60%;" type="text"/>

Use separate submission form for each submitter, collector, collection site, and collection date combination. Attach a separate Bar Code Sticker (if available) for each sample in the spaces below. Attach a separate BSE Surveillance Data Collection Form (VS 17-131) for each animal. Sample IDs on this form match Sample IDs on BSE Surveillance Data Collection Forms.

5. COLLECTION SITE TYPE (select only one)

Slaughter Plant Public Health Lab Diagnostic Lab
 Renderer On Farm 3D-4D
 Other (describe)

7. SAMPLE INFORMATION

Number of Samples

Preservation Ice Pack Other

4. COLLECTION DATE

6. COLLECTED BY or If Same as Submitted by

Name (Including Business Name)

Street

City State ZIP Code

Phone Fax

Email

1 BSE Sample ID <input style="width: 90%;" type="text"/>	5 BSE Sample ID <input style="width: 90%;" type="text"/>	9 BSE Sample ID <input style="width: 90%;" type="text"/>	13 BSE Sample ID <input style="width: 90%;" type="text"/>
2 BSE Sample ID <input style="width: 90%;" type="text"/>	6 BSE Sample ID <input style="width: 90%;" type="text"/>	10 BSE Sample ID <input style="width: 90%;" type="text"/>	14 BSE Sample ID <input style="width: 90%;" type="text"/>
3 BSE Sample ID <input style="width: 90%;" type="text"/>	7 BSE Sample ID <input style="width: 90%;" type="text"/>	11 BSE Sample ID <input style="width: 90%;" type="text"/>	15 BSE Sample ID <input style="width: 90%;" type="text"/>
4 BSE Sample ID <input style="width: 90%;" type="text"/>	8 BSE Sample ID <input style="width: 90%;" type="text"/>	12 BSE Sample ID <input style="width: 90%;" type="text"/>	16 BSE Sample ID <input style="width: 90%;" type="text"/>

8. Additional Data (attach additional page(s) if needed)

9. Shipping Date <input style="width: 90%;" type="text"/>	10. Signature of Submitter <input style="width: 100%;" type="text"/>		
11. Destination Lab <input style="width: 90%;" type="text"/>	12. Shipment Tracking Number <input style="width: 100%;" type="text"/>		Accession Number <input style="width: 100%;" type="text"/>
Condition Received <input style="width: 90%;" type="text"/>	Distribution <input style="width: 20%;" type="text"/>	Received by <input style="width: 20%;" type="text"/>	Date Received <input style="width: 40%;" type="text"/>

Attachment D: USDA BSE Surveillance Data Collection Form (VS Form 17-131)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0409. The time required to complete this information collection is estimated to average .1 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.		OMB APPROVED 0579-0409 EXP.: 12/2020		
UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE VETERINARY SERVICES		BSE SURVEILLANCE DATA COLLECTION FORM		
THIS FORM MUST BE USED IN CONJUNCTION WITH VS 17-146 (BSE SURVEILLANCE SUBMISSION FORM). DO NOT SUBMIT ALONE.				
1. PRIMARY REASON FOR SUBMISSION (check the selection with the smallest number that applies) <input type="checkbox"/> 1. Highly suspicious for BSE <input type="checkbox"/> 2. FSIS, antemortem condemned cattle <input type="checkbox"/> 3. Rabies suspect <input type="checkbox"/> 4. CNS signs <input type="checkbox"/> 5. Nonambulatory/Disabled/Downer <input type="checkbox"/> 6. Other clinical signs that may be associated with BSE as noted below <input type="checkbox"/> 7. Dead		2. BSE Referral Number (must agree with # on VS 17-146)		
3. INDIVIDUAL DETERMINING PRIMARY REASON (BLOCK 1) AND CLINICAL SIGNS (BLOCK 13) (select one) <input type="checkbox"/> 1. Veterinarian employed by APHIS <input type="checkbox"/> 2. Veterinarian employed by FSIS <input type="checkbox"/> 3. Other Veterinarian <input type="checkbox"/> 4. Other APHIS personnel <input type="checkbox"/> 5. Renderer/deadstock hauler/3D-4D <input type="checkbox"/> 6. Producer/owner <input type="checkbox"/> 7. Other (describe in Block 10)		4. BSE Sample ID Please use barcode, if available		
6. OWNER INFORMATION Name (Including Business Name) Street City State ZIP Code Country (if not USA) Premises ID or Lat/Long Phone Fax County Email		8. SLAUGHTER SITE OR <input type="checkbox"/> if came as Collection Site on VS 17-148 (complete only if slaughtered at State or FSIS-inspected facility) Premises ID or FSIS Plant Number Name (Including Business Name) Street City State ZIP Code Phone Fax Email		
7. ANIMAL INFORMATION a. Animal Breed (if known) If breed not known: <input type="checkbox"/> Beef Breed Primary Colors: <input type="checkbox"/> Dairy Breed		b. Age <input type="checkbox"/> Months Age is: <input type="checkbox"/> Estimated <input type="checkbox"/> Recorded <input type="checkbox"/> Years Dentition: 2 nd Set of Incisors Erupted <input type="checkbox"/> Yes <input type="checkbox"/> No c. Gender <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Unknown d. Neutered <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
e. Country of Origin (only if KNOWN to be other than USA)	f. Official USDA Tag No.	g. FSIS Condemnation Tag No.	h. Back Tag No.	i. Microchip No.
	j. Collection Site Tracking No.	Z-	k. Slaughter Tracking No.	l. Owner Ear Tag No.
				m. Other ID No.
8. CLINICAL SIGNS (select all that apply)				
<input type="checkbox"/> Abnormal head carriage <input type="checkbox"/> Aggressive or belligerent <input type="checkbox"/> Apprehensive or nervous <input type="checkbox"/> Ataxia (abnormal gait, uncoordinated) <input type="checkbox"/> Blindness <input type="checkbox"/> Circling <input type="checkbox"/> Droopy lip or eyelid <input type="checkbox"/> Excessive belching <input type="checkbox"/> Excessive licking <input type="checkbox"/> Excitable		<input type="checkbox"/> Head pressing/rubbing <input type="checkbox"/> Head shyness <input type="checkbox"/> Hyperesthesia (sensitivity to light or sounds, shifting ears) <input type="checkbox"/> Hesitation at doors, gates, or barriers <input type="checkbox"/> Kicking while milking (when did not before) <input type="checkbox"/> Paralysis <input type="checkbox"/> Tremors or nystagmus (includes eye movements, head tremors)		Signs marked at left: <input type="checkbox"/> Worsened over time <input type="checkbox"/> Did not worsen <input type="checkbox"/> Don't know The animal: <input type="checkbox"/> Responded to treatment <input type="checkbox"/> Did not respond <input type="checkbox"/> Don't know
Other signs observed: <input type="checkbox"/> Depressed <input type="checkbox"/> Dead of unknown cause <input type="checkbox"/> Loss of weight over time <input type="checkbox"/> Recumbency (nonambulatory/down) <input type="checkbox"/> Reduced milk yield over time <input type="checkbox"/> Other (note in Block 10)				
9. FSIS CONDEMNATION CODES (select one - ONLY if FSIS has made one of these designations)				
<input type="checkbox"/> Degen and Dropsic 099 <input type="checkbox"/> Actinomycosis and Actinobacillosis 101 <input type="checkbox"/> Misc. Infectious dz. 199 <input type="checkbox"/> Arthritis 201 <input type="checkbox"/> Mastitis 203 <input type="checkbox"/> Metritis 204 <input type="checkbox"/> Pericarditis 206 <input type="checkbox"/> Pneumonia 208	<input type="checkbox"/> Misc. Inflamm dz. 299 <input type="checkbox"/> Epithelioma 302 <input type="checkbox"/> Malign lymphoma 303 <input type="checkbox"/> Misc. neoplasms 399 <input type="checkbox"/> Abscess/pyemia 501 <input type="checkbox"/> Septicemia 502 <input type="checkbox"/> Toxemia 503 <input type="checkbox"/> Nonambulatory 445	<input type="checkbox"/> Injuries 605 <input type="checkbox"/> Pigment conditions 607 <input type="checkbox"/> Myiasis 402 <input type="checkbox"/> General misc. 699 <input type="checkbox"/> Residue 609 <input type="checkbox"/> Other reportable dz. 900 <input type="checkbox"/> Misc. parasitic cond. 499	<input type="checkbox"/> Tetanus 105 <input type="checkbox"/> Vesicular dz. 110 <input type="checkbox"/> CNS disorders 601 <input type="checkbox"/> Dead 603 <input type="checkbox"/> Moribund 606 <input type="checkbox"/> Pyrexia 608 <input type="checkbox"/> Rabies 615	
10. ADDITIONAL DATA/COMMENTS				

Attachment E: [IATA 650 Instructions](https://www.iata.org/contentassets/b08040a138dc4442a4f066e6fb99fe2a/dgr-61-en-pi650.pdf)

<https://www.iata.org/contentassets/b08040a138dc4442a4f066e6fb99fe2a/dgr-61-en-pi650.pdf>

PACKING INSTRUCTION 650

STATE VARIATIONS: BHG-02, CAG-05, DQG-03, GBG-05, GHG-02, IDG-02, VCG-04

OPERATOR VARIATIONS: 4C-04, 4M-04, 5X-01, AM-06/10, AR-02, AS-08, BR-14, BZ-07, CM-05, E9-03, FX-04, G3-02, IP-03, JJ-04, KC-08, KE-06, L7-04, LA-07, LH-05, LP-04, LU-04, M3-04, M7-04, MS-06, OS-05, OU-12, PX-08, SN-06/08, SV-12, TN-05, UC-04, WR-03, WS-03, XG-05, XL-04, XQ-05

This instruction applies to UN 3373 on passenger and cargo aircraft and Cargo Aircraft Only.

General Requirements

The packagings must be of good quality, strong enough to withstand the shocks and loadings normally encountered during transport, including trans-shipment between transport units and between transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling. Packagings must be constructed and closed so as to prevent any loss of contents that might be caused under normal conditions of transport, by vibration, or by changes in temperature, humidity or pressure.

The packaging must consist of three components:

- (a) a primary receptacle(s);
- (b) a secondary packaging; and
- (c) a rigid outer packaging.

Primary receptacles must be packed in secondary packagings in such a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings must be secured in outer packagings with suitable cushioning material. Any leakage of the contents must not compromise the integrity of the cushioning material or of the outer packaging.

Packages must be prepared as follows:

(a) For liquid substances:

1. The primary receptacle(s) must be leakproof and must not contain more than 1 L;
2. The secondary packaging must be leakproof;
3. If multiple fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated to prevent contact between them;
4. Absorbent material must be placed between the primary receptacle and the secondary packaging. The absorbent material, such as cotton wool, must be in sufficient quantity to absorb the entire contents of the primary receptacle(s) so that any release of the liquid substance will not compromise the integrity of the cushioning material or of the outer packaging;
5. The primary receptacle or the secondary packaging must be capable of withstanding, without leakage, an internal pressure of 95 kPa.
6. The outer packaging must not contain more than 4 L. This quantity excludes ice, dry ice or liquid nitrogen when used to keep specimens cold.

Note:

The capability of a packaging to withstand an internal pressure without leakage that produces the specified pressure differential should be determined by testing samples of primary receptacles or secondary packagings. Pressure differential is the difference between the pressure exerted on the inside of the receptacle or packaging and the pressure on the outside. The appropriate test method should be selected based on receptacle or packaging type. Acceptable test methods include any method that produces the required pressure differential between the inside and outside of a primary receptacle or a secondary packaging. The test may be conducted using internal hydraulic or pneumatic pressure (gauge) or external vacuum test methods. Internal hydraulic or pneumatic pressure can be applied in most cases as the required pressure differential can be achieved under

PACKING INSTRUCTION 650 (continued)

most circumstances. An external vacuum test is not acceptable if the specified pressure differential is not achieved and maintained. The external vacuum test is a generally acceptable method for rigid receptacles and packagings but is not normally acceptable for:

- flexible receptacles and flexible packagings;
- receptacles and packagings filled and closed under an absolute atmospheric pressure lower than 95 kPa.

(b) For solid substances:

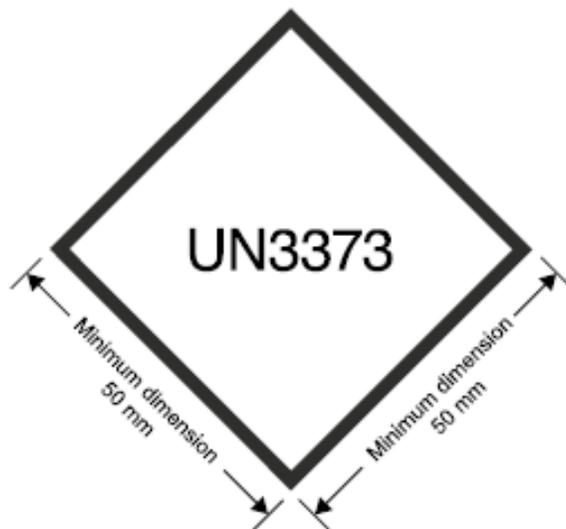
1. The primary receptacle(s) must be siftproof and must not exceed the outer packaging weight limit;
2. The secondary packaging must be siftproof;
3. If multiple fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated to prevent contact between them;
4. Except for packages containing body parts, organs or whole bodies, the outer packaging must not contain more than 4 kg. This quantity excludes ice, dry ice or liquid nitrogen when used to keep specimens cold;
5. If there is any doubt as to whether or not residual liquid may be present in the primary receptacle during transport then a packaging suitable for liquids, including absorbent materials, must be used.

An itemized list of contents must be enclosed between the secondary packaging and the outer packaging.

At least one surface of the outer packaging must have a minimum dimension of 100 mm × 100 mm.

The completed package must be capable of successfully passing the drop test described in 6.5.4.4 as specified in 6.5.4.2 except that the height of the drop must not be less than 1.2 m. Following the appropriate drop sequence, there must be no leakage from the primary receptacle(s) which must remain protected by absorbent material, when required, in the secondary packaging.

For transport, the mark illustrated below must be displayed on the external surface of the outer packaging on a background of a contrasting colour and must be clearly visible and legible. The mark must be in the form of a square set at an angle of 45° (diamond-shaped) with each side having a length of at least 50 mm, the width of the line must be at least 2 mm and the letters and numbers must be at least 6 mm high. The proper shipping name "Biological Substance, Category B" in letters at least 6 mm high must be marked on the outer packaging adjacent to the diamond-shaped mark.



Unless all package marks are clearly visible, the following conditions apply when packages are placed in an overpack:

- the overpack must be marked with the word "Overpack" in lettering at least 12 mm high; and
- the package marks must be reproduced on the outside of the overpack.

A Shipper's Declaration for Dangerous Goods is not required.

Alternative packagings for the transport of animal material may be authorized by the competent authority in accordance with the provisions in 5.0.6.7.

PACKING INSTRUCTION 650 *(continued)*

Specific Requirements

Refrigerated or frozen specimens: Ice, dry ice and liquid nitrogen:

- When dry ice or liquid nitrogen is used to keep specimens cold, all applicable requirements of these Regulations must be met. When used, ice or dry ice must be placed outside the secondary packagings or in the outer packaging or an overpack. Interior supports must be provided to secure the secondary packagings in the original position after the ice or dry ice has dissipated. If ice is used, the outside packaging or overpack must be leakproof. If dry ice is used, the packaging must be designed and constructed to permit the release of carbon dioxide gas to prevent a build-up of pressure that could rupture the packagings.
- The primary receptacle and the secondary packaging must maintain their integrity at the temperature of the refrigerant used as well as the temperatures and the pressures, which could result if refrigeration were to be lost.

Infectious substances assigned to UN 3373 which are packed and marked in accordance with this packing instruction are not subject to any other requirement of these Regulations except for the following:

- (a) the name and address of the shipper and of the consignee must be provided on each package;
- (b) the name and telephone number of a person responsible must be provided on the air waybill or on the package;
- (c) the classification must be in accordance to 3.6.2;
- (d) the incident reporting requirements in 9.6.1 must be met; and
- (e) the inspection for damage or leakage requirements in 9.4.1 and 9.4.2.

Note:

When the shipper or consignee is also the 'person responsible' as referred to in b) above, the name and address need be marked only once in order to satisfy the name and address marking provisions in both a) and b), above.

Passengers and crew members are prohibited from transporting infectious substances as or in carry-on baggage, checked baggage or on their person.

[¶]If an Air Waybill is used, the "Nature and Quantity of Goods" box must show "UN 3373", the text "BIOLOGICAL SUBSTANCE, CATEGORY B" and the number of packages (unless these are the only packages within the consignment).

Clear instructions on filling and closing such packages must be provided by packaging manufacturers and subsequent distributors to the shipper or to the person who prepares the package (e.g. patient) to enable the package to be correctly prepared for transport.

Other dangerous goods must not be packed in the same packaging as Division 6.2 Infectious Substances unless they are necessary for maintaining the viability, stabilizing or preventing degradation or neutralizing the hazards of the infectious substances. A quantity of 30 mL or less of dangerous goods included in Classes 3, 8 or 9 permitted as excepted quantities under 2.8 may be packed in each primary receptacle containing infectious substances. When these small quantities of dangerous goods are packed with infectious substances in accordance with this packing instruction, no other requirements in these Regulations need be met.

Attachment F: BSE Sample Collection Requirements



United States Department of Agriculture

Animal and Plant
Health Inspection
Service

Veterinary Services

4700 River Rd

Riverdale, MD 20737

MEMORANDUM

TO: All BSE Sample Collectors and Submitters

FROM: José Urdaz
Bovine Spongiform Encephalopathy (BSE) Program Manager

SUBJECT: BSE Sample Collection Requirements

JOSE URDAZ Digitally signed by JOSE URDAZ RODRIGUEZ
Date: 2018.11.14
08:39:09 -0700
RODRIGUEZ

This informational memo reminds all contracted BSE sample collectors and submitters to strictly follow USDA APHIS collection requirements when collecting and submitting samples for the BSE national surveillance program. This information was originally presented in the contractors' statement of work (SOW). Please see attached enclosure.

APHIS wants to reaffirm with BSE sample collectors and submitters that following the established BSE collection requirements is critical to maintain the integrity of the BSE national surveillance program.

All sample collectors and submitters **must** abide by the following USDA APHIS requirements:

- Carcasses, offal and head from sampled animals must be held until negative test results are received. The identity and location of tested animals and their parts must be documented and maintained throughout the entire sample collection, submission, and testing process. It is very important to mark the location where the animal/carcass was buried in case it needs to be exhumed. Adequate carcass recognition is important for an accurate trace back of the brain stem sample.
- All animal identification devices, brands (via digital picture or drawing), and tattoos (refrigerate tissue containing tattoo) from each animal sampled must be collected and maintained until negative results are received. Identification devices shall be 1) packed in a bag, 2) labeled with the sample number and bar code sticker, 3) accompanied by a copy of the USDA BSE Surveillance Submission Form, and 4) refrigerated until negative results are received. Identification devices should also include some attached tissue (at least dime-sized) if carcasses/heads are not retained.
- The sample information must be entered into the BSE surveillance database (Veterinary Services Laboratory Submissions – VSLS) before samples are shipped to the designated laboratory. The sample information should be available in VSLS upon arrival of the sample to the laboratory.

All BSE Sample Collectors and Submitters

Page 2

Laboratories need to have the sample's general information in VSLs to properly match and attach test results to the corresponding sample.

- Any records created or maintained which deal with BSE sampling or testing must be maintained as required by the APHIS record retention guidelines for six (6) years for "not detected" or negative samples; indefinitely, or as directed by APHIS, for inconclusive or positive samples.

BSE sample collectors and submitters must ensure that these sample collection requirements are met in the future. APHIS requests that BSE sample collectors and submitters assess their current sampling protocols and modify them to ensure compliance and/or address deficiencies. If a sample collector or submitter is found to not be in compliance upon inspection, government reserves the right to cease all future BSE sample collections with said collector or submitter.

Attachment G: BSE VSLs Quick Start Guide



BSE Program

Bovine Spongiform Encephalopathy



Veterinary Services Lab Submission (VSLs) using a Web Form

- Help Desk Phone #** (877) 944-8457
- URL** <https://cowebapps.aphis.usda.gov/vslabsub>
- Assumptions** You know how to navigate in the web form, and have a login & password to the VS Lab Submission application.
- Required fields** You **must** enter information into the fields next to **red-colored text** with asterisk (*).
- Pop-up Blockers** To perform all tasks in application, it is recommended that you temporarily turn off your pop-up blocker in web browser.

Action Items

Create Lab Submission
Review Lab Submissions
Enter Lab Results

This job aid provides field descriptions & process flows for action items listed above. User permissions allow access.

These buttons [Home](#) | [Blank Worksheet](#) | [Help](#) | [Logout](#) appear in the top right corner of each lab submission screen.

- Home** takes you to the Welcome/Home screen.
- Blank Worksheet** provides links to forms such as BSE Cattle Data Collection Form.
- Logout** takes you completely out of the VS Lab Submission module.
- Help** provides links to relevant documents.
- USE** [Home/Screen](#) | **NOT** in application.

Action #1 – Create Lab Submission

Click on the **Create Lab Submission** action item on the VSLs Welcome/Home screen.

Note: If you start to create a lab submission (LS) and do not complete it, an incomplete copy is stored on the Welcome/Home screen of the VSLs application. You can access it by clicking on the Referral #. You can also access it through the Review Lab Submissions Action Item on the Welcome/Home screen.

1 | SUBMISSION INFORMATION

- Program** – Select BSE Ongoing Surveillance Program from the menu.
- Referral Number** – Manually enter a number that uniquely identifies a lab submission using the following recommended format:
 - Two character state abbreviation
 - Your initials (3 letters)
 - The date – MMDDYYYY
 - A letter to distinguish between multiple submissions on the same day

Click on the **Help** icon for field help for the Referral # field.

- Collection Date** – The default is the current date. To change, use one of the following methods:
 - Select date from calendar at end of field.
 - Type “I-3” for 3 days before the current date and press Tab key.
 - Manually enter date. format: mm/dd/yyyy

Create New Submission

Click, to go to Collection Information screen to start a new lab submission for your samples.

– Collection Information Section –

2 | COLLECTION SITE INFORMATION

Enter information about the collection site using one of the following methods.

Method A – Search Button

- Click to display the Premises Search screen.
- Enter criteria into the appropriate fields.
- Click on Search to display the search results.
- Select premises by clicking in round button to left of it.
- Click on Select button.
- Information found in the database auto-fills the Collection Site Information fields.

Cancel

Click, to stop a search & return to Collection Site Information block.

Reset Fields

Click, to clear search criteria.

Method B – Prem ID & Find Prem ID/Plant # Button

- Enter Prem ID into Prem ID field.
- Click on Find Prem ID/Plant # button.
- Information found in the database auto-fills the Collection Site Information fields.

Method C – FSIS Plant # & Find Prem ID/Plant # Button

- Enter FSIS (Food Safety Inspection Service) Plant # into the FSIS Plant # field.
- Click on Find Prem ID/Plant # button.
- Information found in the database auto-fills the Collection Site Information fields.

Method D – Manually Enter Data

If Methods A – C did not auto-fill the fields, manually enter information.

- Collection Site Type** – Classification of site where specimens were collected (e.g. Slaughter Plant, Renderer, On Farm, Public Health Lab, Diagnostic Lab, 3D – 4D)
- Business/Farm Name** – Familiar name of business or farm.
- First Name / Last Name** – Name of site primary contact. **Note:** Either Business/Farm name or name of primary contact is required. You can enter both. Click on Help icon for assistance.
- Street / City / State / Zip** – Address of business or farm.
- Latitude (N) / Longitude (W)** – Northern/Western geographic coordinates of the Premises main gate where the animal last resided.
- Phone / Fax / Email** – Contact information for site primary contact.

3 | COLLECTED BY INFORMATION

Enter information about the collector using one of the methods listed below.

Method A – Search Button

- Click on search button to display the Person Search screen.
- Enter criteria into the appropriate fields.
- Click on Search to display the search results.
- Select person by clicking in round button to left of the name.
- Click on Select button.
- Information found in the database auto-fills the Collected By Information fields.

Cancel

Click, to stop a search and return to the Collected By Information block.

Reset Fields

Click, to clear search criteria.

Method B – Are you the Collector? Yes No

- If you are the Collector, click in the round button next to Yes.
- The Collected By fields auto-fill with your information.

Create Lab Submission (continued)

Method C – Manually Enter Data

If Methods A & B did not auto-fill the fields, manually enter information.

- **Business Name** – The familiar name of business with which collector is associated.
- **First Name/Last Name** – The name of collector.
- **Street/City/State/Zip** – The address of collector.
- **Phone/Fax/Email** – The contact information for collector.

Is the Collector also the Submitter?*: Yes No If Yes, the Submitted By Information fields are auto-filled. Note: The information is not displayed at this time. If No is selected, a Submitted By screen is displayed.

4 SUBMITTED BY INFORMATION

Enter sample submitter information using one of the following methods.

Method A – Search Button

- a. Click on the search button to display the Person Search screen.
- b. Enter criteria into the appropriate fields.
- c. Click on Search to display the search results.
- d. Select person by clicking in round button to left of the name.
- e. Click on Select button.
- f. Information found in the database auto-fills the Submitted By Information fields.

Click, to stop a search and return to the Submitted By Information block.

Click, to clear search criteria.

Method B – **Is the Collector also the Submitter?***: Yes No

- a. If the Collector is also Submitter, click in round button next to Yes.
- b. The Submitted By fields auto-fill with the Collector's information.

Method C – Manually Enter Data

If Methods A & B did not auto-fill the fields, manually enter information.

- **Business Name** – Familiar name of business with which submitter is associated.
- **First Name/Last Name** – Name of person submitting the samples.
- **Street/City/State/Zip** – Address of submitter.
- **Phone/Fax/Email** – The contact information for submitter.

5 REFERRAL DETAILS

Enter general information about the samples associated with this VLSL record.

- **Number of Samples** – Enter the number of samples associated with this VLSL record that will be sent to a laboratory for testing.
- **Preservation** – Select from the menu the type of preservation that will be used to ship the samples to the laboratory (Ice Pack or Other).

Auto-Sequence Sample IDs?*: Yes No If you want the sample barcode IDs to automatically number in sequence, click in the round button next to Yes. If you do not want this functionality, click in the No button.

6 COMMENTS

Add observations, concerns, or remarks regarding this VLSL record.

Note: If Preservation Method in Referral Details section is Other, a comment must be entered in this field to describe the preservation method.

Click, to save data and proceed to Sample Information screen.

Click, to go back to the Welcome/Home screen.

Click, to remove entire VLSL record.

- Sample Information Section -

7 SAMPLE INFORMATION

Enter information related to the collected samples.

- **BSE Sample ID** – A barcode value that uniquely identifies a sample.
- **Sequence #** – A value that is manually entered or auto-sequenced to help you organize samples. (Starts at 1 and increments by 1 for every subsequent sample.)
- **Submission Reason** – Select motivation for taking sample from the menu. Choices are listed in the following table.

▪ Highly Suspicious for BSE	▪ Nonambulatory/Disabled/Downer
▪ FSIS, antemortem condemned cattle	▪ Other clinical signs possibly associated with BSE as noted below
▪ Rabies suspect	▪ Dead
▪ CNS Signs	

- **Determinater** – The title of the individual who determined both the reason for the submission and the clinical signs of the subject.
- **Other Determinater** – If the Determinater is "Other", enter title of individual in this field.

8 OWNER INFORMATION

Enter information related to the owner of the animals as well as information about the animals into the appropriate fields.

- **Business** – Familiar name of business where the animal last resided.
- **First Name / Last Name** – Full name of owner.
- **Street / City / State / Zip** – Address of facility where the animal resided. Click on ? for additional information about the State field.
- **County** – County in which animal resided.
- **Country (If not USA)** – Country in which animal resided (if not USA). Click on ? for additional field information.
- **Latitude (N) / Longitude (W)** – Northern/Western geographic coordinates of the main gate of the premises where the animal last resided.
- **Phone / Fax / Email** – Contact information for the owner.

Note: After the first sample is saved, the following pop-up message appears.

Owner same as last sample?* Yes No

Click on Yes to auto-fill the owner fields if the animal from which the sample was collected has the same owner as the last animal entered. If you select No, you must manually enter owner information into the fields.

9 SLAUGHTER SITE INFORMATION

Enter information related to the plant where the animal was slaughtered.

Click, Yes, No, or N/A to the question "Slaughter site same as collection site?" Yes No N/A

Yes – In order for the fields to auto-fill with collection site information, the collection site had to be identified as a Slaughter Plant in Create Lab Submission step 2.

No – The Slaughter Site Information fields are displayed for you to fill out. Refer to step 2 – Collection Site Information for field definitions and process steps (Note: Replace words Collection Site with Slaughter Site).

N/A – If the animal has not been or will not be slaughtered, select NA and all data fields collapse; no need to enter data in any fields.



BSE Program

Bovine Spongiform Encephalopathy



Veterinary Services Lab Submission (VSLs) using a Web Form

Create Lab Submission (continued)

10 ANIMAL INFORMATION

Enter information related to the suspect animal.

- Breed** – A special type of animal within a species. Select from menu a common breed such as Holstein, or an uncommon breed such as Belgian Blue, or select Unknown.
- Primary Colors** – Manually enter the main colors of the animal.
- Age** – Manually enter numeric age of the animal. Select either Years or Months from menu. Also select whether age is Estimated or Recorded.
- Dentition** – Has 2nd set of incisors (teeth) erupted? Select Yes or No.
- Gender/Neutered** – There are two fields, side-by-side. **Gender:** The sex of the animal. Select from menu: Male, Female, or Unknown. **Neutered:** Has the animal been castrated or spayed (neutered)? Select from menu: Neutered, Not Neutered, or Unknown.
- Country of Origin (If not USA)** – If animal did not originate in the United States, select from menu either Canada or Mexico.

11 ANIMAL ID DETAILS

Enter information related to the identification of the animal. Note: An animal can have several forms of identification.

- Animal ID Value** – Manually enter the alpha-numeric value from the identifying device.
- ID Types** – There are several kinds of identification devices. Select one kind from the menu that includes:

▪ Official USDA Tag	▪ Collection Site Tracking
▪ FSIS Condemnation Tag (must start with letter Z)	▪ Slaughter Tracking
▪ Owner Ear Tag	▪ Back Tag
▪ Other ID Type	▪ Microchip

Click, to add another Animal ID and ID Type.

- Click, to delete the Animal ID and associated ID Type next to the trash can icon. The message "Are you sure you want to delete this Animal ID?" appears, to verify it is the action you desire. Click OK to continue with the deletion, or click Cancel to abort the deletion.

12 CLINICAL SIGNS

There are three areas on the screen to collect the clinical signs an animal may exhibit. Select all that apply.

- Clinical Signs** – Click in checkbox next to signs animal is exhibiting. Examples: Circling, excessive licking, excitable, paralysis ...
- Clinical Signs - Additional Info - Condition(s)** – Select whether the condition is progressive (Yes, No, Don't Know) and if the animal DID NOT respond to treatment (Yes, No, Don't Know). A Yes selection means that the animal did not respond to treatment.
- Additional Clinical Signs** – Click in checkbox next to signs animal is exhibiting. Examples: Depressed, loss of weight over time, dead of unknown cause ...

13 FSIS CONDEMNATION CODES

If the Submission Reason selected in step 7 was "FSIS Ante mortem Condemned Cattle", you are required to fill out the FSIS Condemnation Code if the FSIS (Food Safety & Inspection Service) has made a designation.

Select a code based on the FSIS designation from the menu. Examples of the codes are: Arthritis (201), Dead (603) and Pneumonia (208).

14 COMMENTS

Enter remarks relevant to the samples if appropriate. Note: If you chose "Other" for Additional Clinical Signs, enter the name of the clinical sign in the Comments field.

15 SAMPLES LIST

This list displays, in table format, the sample information you entered. (Note: Samples List does not display until you click on Save & Add Another Sample button.) The information includes:

- Sequence# (Seq#)
 - Sample ID
 - Submission Reason
 - Breed
 - Age
 - Gender
- Refer to Create Lab Submission steps 7 and 10 for field definitions.

Click in round button next to a sample to edit, copy, or delete it.

- Click, to modify sample information.
- Click, to copy the Slaughter Site data if applicable, Submission Reason, and Determinator into a new sample record.
- Click, to delete the sample from the list.

Click, to save information for a sample. A message "Sample successfully saved" is displayed, and the sample information fields are redisplayed to enter information about another sample.

Click, to save sample information, and proceed to the Review Submission screen.

Click, to go to Review Submission screen without saving information.

Click, to go to previous screen without saving data.

Click, to delete the entire VSLs record.

16 REVIEW SUBMISSION

This screen displays all of the information you entered into this particular VSLs record. You can review all information and edit most fields if necessary before submitting the information.

- Submission Information:** Program, Submission Status, Referral # and Collection Date are displayed. Referral # and Collection Date can be modified.
- Collection Information:** Click on the Edit button to modify information such as Collection Site Information, Collected By Information, Submitted By Information, and Comments.
- Samples List:** Select a sample by clicking in the round button to the left of the Seq #. You can then perform any of the following:

Click, to modify information. After you modify it, click on Save & Continue button to save the change and go back to the Review Submission screen.

Click, to delete the entire VSLs record.

Click, to add a new sample. After adding it, click on Save & Continue button to save the new addition and go back to the Review Submission screen.

Create Lab Submission (continued)

At the end of the Review Submission screen, Laboratory Information fields are displayed. Enter appropriate information.

• Laboratory Information

- **Testing Laboratory** – Name of lab that will test the samples associated with this VLSL record. Select a lab from the menu.
- **Shipping Date** – Actual date samples were shipped to the laboratory. Select date from calendar at end of field.
- **Tracking Number** – A unique number assigned by the courier to enable package tracking.
- **Number of Samples** – The number of samples associated with this VLSL record that were sent to the lab for test. The number is auto-filled from previously entered information; however, it can be changed if necessary.
- **Preservation** – The type of packaging used to preserve the samples during shipping; for example, ice pack. This field is auto-filled from information entered in Create Lab Submission step 5, and it can not be changed here.

The following buttons are now available. Click on the appropriate button to perform the desired action.

Save Submission Click, to save the information in the VLSL record (This only saves your info; it does not submit the VLSL record).

Complete Submission Click, to save and submit the entire VLSL record. The message “The submission was completed successfully” is displayed.

WARNING: Once you mark a submission complete, the data is available for reporting & the assigned lab can enter test results. If you need to edit the submission AFTER it has been completed:

- Click **Edit This Submission** .
Note: The submission **LOCKS** while you are editing the data; no one else can modify it while it is locked.
- When your edits are complete, click **Save and Continue >>** .
- The message “The submission updates were successfully saved” is displayed.
- In order to **UNLOCK** the submission when you are done editing, you must click **Finish Editing Submission** .

Delete This Submission Click, to delete the entire VLSL record.

<< Previous Screen Click, to go to last screen accessed (Note: Data will not be saved).

After you complete the submission, the following buttons are available at the bottom of the Review Submission screen.

View Sample Information Click, to view sample information after selecting a sample.

Edit This Submission Click, to edit info. in the completed VLSL record.

Print Packing Slip Click, to print Packing Slip; then place in package with samples.

Contents of the Packing Slip

- Program name
- Referral #
- Submission Information (Submitted By, Phone, Date Submitted, Date Collected, and Submitted to Lab name)
- Remarks
- Sample List (Total # of Samples, Seq#, Sample Barcodes, Submission Reason, Breed, Age, and Sex)

Print Form Click, to view and print the completed VLSL record.

Finish Click, to return to the Welcome/Home screen.

Action #2 Review Lab Submissions

Click on the Review Lab Submissions action item on the Welcome/Home screen.

1 SEARCH CRITERIA

Click on  in the Search Criteria heading to see detailed instructions for entering search criteria. The instructions address criteria in menu fields, text fields, and date fields. To narrow your search, enter more criteria.

- **Program** – Select BSE Ongoing Surveillance Program from the menu.
- **Referral #** – Default is wildcard %. Follow the help instructions  for text field entry.

- **Collection Date Between** – The default is blank. You can use the first calendar  icon to insert the beginning date of the search and the second calendar icon for the ending date of the search.

- **BSE Sample ID** – Default is wildcard %. If you know the barcode, you can enter it in this field.

- **Collection State** – Can select the state in which the sample collection occurred by choosing a state code (e.g. TX for Texas) from the menu.

- **Animal ID** – Default is wildcard %.

- **Submitted By (Last, First)** – Default is wildcard %. If you know the name of the submitter, you can enter it in this field.

- **Submission Status** – Can select a value from the menu.

- **Incomplete:** A lab submission record is in process and not yet submitted.

- **Submitted to Lab:** A lab submission record has been submitted and physical specimens sent to a lab for testing.

- **Results Approved:** A lab submission record has been submitted; physical specimens sent to the lab; the lab tested the specimens and entered lab results.

- **Collection Site Name** – Default is wildcard %. Can enter name of collection site if you know it. Follow help instructions for text field data-entry tips.

- **Test Lab** – Can select name of the lab performing tests on the samples from the menu.

- **Lab Accession #** – Default is wildcard %. Can enter lab accession number if you know it.

Search Click, for a list of all lab submissions that meet search criteria.

Reset Search Criteria Click, to clear the search criteria fields and display the defaults; you can now enter new search criteria.

Cancel Click, to stop the search and return to the Welcome/Home screen.

2 SEARCH RESULTS

A list of the lab submissions that meet your criteria is displayed in the Search Results block. If you do not see the submission you are looking for, check to see if there is a **View Next**  button. This indicates that there are more submissions on the next page.

Click on the View Next button to see the continued list. You will now notice that there is a **View Previous**  button to help you navigate between pages of the Search Results list.

Click on  in the Search Results heading to see detailed instructions for sorting search results.

Changing the sort direction of the results list:

Click on a column header (Referral #, Collection Date, Collection State, Submission Status or Date Submitted), then click on the arrow icon.

- If the up arrow  icon displays, the records sort in ascending order (lower to higher).

- If the down arrow  icon displays, the records sort in descending order (higher to lower).

Once you find the desired lab submission record:

- **Select the record** by clicking in the round  button to the left it.
- **Click on one of the buttons below** to perform the appropriate action.

Review Submission Click, to display the lab submission record.

Cancel Click, to exit search environment & go to Welcome/Home Screen.



BSE Program

Bovine Spongiform Encephalopathy



Veterinary Services Lab Submission (VSLS) using a Web Form

Review Lab Submissions (continued)

If you clicked on Review Submission:

Other buttons become available depending on the submission status.

Submitted to Lab status

- View Sample Information** Click, to review the sample records.
- Edit This Submission** Click, to edit info. in the completed VSLS record.
- Print Packing Slip** Click to view and print the Packing Slip.
- Print Form** Click to print the entire selected VSLS record.
- << Previous Screen** OR **Finish** Click, to go to Search Criteria/Search Results screen.

Incomplete status

- Edit** Click, to edit the Collection Information.
- Edit** **Delete** **Add New Sample** Click, on one of the buttons to the left to edit, delete or add a sample to the samples list.
- Save Submission** **Complete Submission** **Delete This Submission** **<< Previous Screen**

Click on the appropriate button above to save edits to the VSLS record, complete the lab submission record, delete the entire VSLS record, or return to the Search Criteria/Search Results screen.

Results Approved

- View Sample Information** Click, to view the sample record.
- Edit This Submission** Click, to edit info. in the completed VSLS record.
- Print Packing Slip** Click, to view and print the Packing Slip.
- Print Form** Click, to print the entire selected VSLS record.
- View Lab Results** Click, to view Lab Results.
- << Previous Screen** Click, to go to the Search Criteria/Search Results screen

Action #3 - Enter Lab Results

Click on Enter Lab Results action item on VSLS Welcome/Home screen.

1 SEARCH FOR and SELECT RECORD

Use search techniques described in Action #2 - Review Lab Submissions. Only records in the Submitted to Lab and Results Approved status can be edited to enter lab results. Click **Enter Lab Results** to display the screen.

2 SELECT USER LAB

Acting on behalf of lab . . . Menu displays all labs assigned to you. Select the appropriate lab. Note: This screen is only displayed if you are assigned to more than one lab.

- Select Lab** Click, when the correct lab displays in the field.
- << Previous Screen** Click, if you decide not to choose a lab.

3 SUBMISSION INFORMATION

- Program** - BSE Ongoing Surveillance Program.
- Referral #** - Refer to Action #1 - Create Lab Submission, step 1 for definition.
- Collection Date** - Refer to Action #1 - Create Lab Submission, step 1 for definition.

Enter Lab Results (continued)

4 LAB INFORMATION

Enter information related to the lab that received the specimens for test.

- Laboratory Name** - The name of the local lab that initially received the specimens to test (preliminary screening tests). Auto-filled based on the name of the lab selected during Action #1- Create Lab Submission, step 16.
- Total # of Specimens** - The number of specimens associated with a particular VSLS record that were sent to the testing lab. Field is auto-filled with **number of samples** entered in Action #1- Create Lab Submission, step 5.
- Conditions to Test for** - Auto-filled with BSE.
- Date Specimens Received** - Date the testing laboratory received specimens. Select appropriate date from calendar icon.
- Received By** - Enter name of person receiving the samples.

5 SPECIMEN LIST

Enter test results and related information for each specimen associated with the VSLS record.

If all test results are the same, click the checkbox to copy results.

Copy test results from the first specimen to the other specimens? **Yes** **No**

- Seq #** - Auto-filled sequence # from the Sample Information in Action #1 - Create Lab Submission.
- Specimen Barcode** - Unique barcode that identifies a specific specimen. Each specimen must have its own valid bar code.
- Lab Accession #** - A value assigned by the lab to help them organize the specimens and associated test entries. It can be manually entered or auto-sequenced.
- Test Type** - The kind of test the lab used on the specimen. Select from the following menu choices:

<input type="checkbox"/> ELISA	<input type="checkbox"/> Western Blot
<input type="checkbox"/> IHC	<input type="checkbox"/> Electron Microscopy
<input type="checkbox"/> Histopathology	<input type="checkbox"/> NONIHC

- Test Result** - The outcome of the test. Select from the following menu choices:

<input type="checkbox"/> Not Detected	<input type="checkbox"/> Not Tested - WAL (Wrong Anatomical Location)
<input type="checkbox"/> ND/Not Obex	<input type="checkbox"/> Not Tested - TDFAO (Tissue Degen Prevent Anat Orientation)
<input type="checkbox"/> Inconclusive	<input type="checkbox"/> Not Tested - IQ (Insufficient Quantity)
<input type="checkbox"/> Positive	<input type="checkbox"/> Not Tested - SNR (Sample not Received)
<input type="checkbox"/> Not tested - ATD (Advanced Tissue Decomposition)	<input type="checkbox"/> Not Tested - Other

- Test Date** - Date specimen was tested. Select appropriate date from calendar icon next to field.

Enter Lab Results (continued)

• **Final Result** – The final test determination for the specimen. Select from the following menu choices.

<input type="checkbox"/> Not Detected	<input type="checkbox"/> Positive
<input type="checkbox"/> ND/Not Obex	<input type="checkbox"/> Not tested
<input type="checkbox"/> Inclusive	

Select specimens in the list by clicking in the checkboxes next to them on the left-hand side. You can then click on the following buttons to perform other functions if desired.

Click on for more details about button functionality if necessary.

Add Tests to Specimens Click, to add another test & associated information for a specimen. Click on to delete an added specimen record from the list.

Re'or Specimens Click, to refer specimens to another lab.

Clear Fields Click, to clear entered data in the selected specimen records.

Use the following buttons to perform the desired next steps.

Save Lab Results Click, to save entered test results. You can change results and save as many times as necessary at this point. Note: It is good practice to save results BEFORE referring specimens to a lab.

Save and Mark Lab Results Complete Click, if you are done entering, modifying, and referring preliminary screening test information. This completes the test result data entry for your lab.

<< Previous Screen Click, to go back to the Select User Lab screen or the Lab Submission Search screen.

6 REFER SPECIMENS

Select specimens, and click **Refer Specimens** to begin the process of referring specimens to another lab. *Note: For BSE, the ONLY lab set up to receive referred specimens is NVSL (National Vet Services Lab).*

• **Submitting Laboratory** – Lab that initially received the specimens and is sending them to another lab for testing. Field is auto-filled based on name entered in Action #1- Create Lab Submission, step 16.

• **Refer to Laboratory** – Lab that will receive specimens for testing.

Select Lab Click, if default lab is correct. If it is not correct, select lab from menu & click on Select Lab button.

Change Refer to Lab Click, to select a different lab if you have already clicked on the Select Lab button.

Select Specimens from the Original Specimens list (if you didn't select them before you checked on the Refer Specimens button).

Original Specimens Submitted to Colorado St Univ Vet Diag Lab			
	Seq #	Specimen Barcode	Lab Accession #
<input type="checkbox"/>	1	10009267	1
<input checked="" type="checkbox"/>	2	10009268	2

The selected specimens are automatically transferred to the Specimens to Refer to ... list.

Specimens to Refer to National Vet Services Lab	
Specimen Barcode	Referred Date
10009268	05/23/2007

The date is filled in after you click on Refer Specimens button.

• **Referral Date** – The date specimens were referred to the lab. Default is current date. If incorrect, select another date from the calendar next to field.

• **Referral Reason** – Select from the menu the reason you are referring specimens to another lab.

Test Confirmation	If test results were inconclusive or positive, you must refer the specimen to NVSL for confirmatory testing.
Over Capacity	If laboratory cannot accept more work due to existing heavy workload, specimens can be referred to NVSL.
Redirected	If for reasons other than capacity, laboratory cannot accept specimens for test, specimens can be referred to NVSL.

• **Remarks** – Add additional information that will be useful to the laboratory receiving the specimens.

Refer Specimens Click, to refer specimens to "Referred to Laboratory". The message "Specimens referred successfully" is displayed.

Save Referral Changes Click, if you have changed the referral information after clicking on Refer Specimens button. The message "Specimens Referred Successfully" is displayed to let you know the changes were successfully transmitted. The new referral will be saved and sent to the lab. Changes can be made in this way until the receiving lab enters and saves test results for a specimen. At this point, that particular specimen can no longer be referred to another lab.

Delete This Referral Click, to delete the referral you sent to other lab.

<< Previous Screen Click, to return to the Lab Test Results screen.

Note: If you have referred documents to another lab, a Referred Specimen List is available at bottom of Lab Test Results screen.

Referred Specimen List: This list is on the Lab Test Results screen (previous screen). Click on arrow to display/hide associated information (Info includes: Referred to lab name, specimen bar code numbers, Edit Referred Specimens button, and Delete Lab Referral button).

Edit Referred Specimens Click, to change the following: Refer to lab, Specimens to refer, Referral date, Referral reason, or Referral remarks.

Delete Lab Referral Click, to delete the referral.

If you clicked on Edit Referred Specimens, the following buttons are available. Refer to descriptions above for button functionality.

Save Referral Changes **Delete This Referral** **<< Previous Screen**

7 COMPLETE TEST RESULT ENTRY FOR YOUR LAB

Save Lab Results Click, to save entered test results.

Save and Mark Lab Results Complete Click, if you are done entering, modifying, and referring preliminary screening test information. This completes the test result data entry for your lab.

The following message is displayed.

The submission lab results were successfully completed!

<< Previous Screen Click, to go back to the Select User Lab screen or the Lab Submission Search screen.

- End of Instructions -