1. Purpose:
Specimens received in the University of Minnesota Veterinary Diagnostic Lab (UMVDL) Necropsy Section may pose an infectious disease risk to staff, students and visitors to the lab. This SOP establishes procedures for determining the risk of exposure and managing it by specimen handling procedures and use of protective equipment and facility design. This SOP deals primarily with BSL-2 suspect cases. The procedures in this SOP are performed in either the BSL-2 Necropsy Lab (BSL-2 NL) or the BSL-3 Necropsy Lab (BSL-3 NL) when it is ‘not hot’ (refer to definition 3.2.1). For procedures that relate to Biosafety Level 3 suspect cases, see “NEC.SOP.017, BSL-3 Necropsy Lab Specimen Handling”, “NEC.SOP.018, BSL-3 Necropsy Lab Personnel Entry and Exit Procedures”, “NEC.SOP.053, BSL-3 Sharps Safety”, “NEC.SOP.057, BSL-3 Specimen Receiving: Identification and Communication”, “NEC.SOP.058, BSL-3 Suspect Receiving, Containment, Transport and Decontamination” and “NEC.SOP.033, BSL-3 Necropsy Lab Decontamination”.

2. Responsibility:
It is the responsibility of the VDL Section Manager to ensure training for staff that will perform this SOP. It is the responsibility of laboratory personnel using this procedure to read, understand, receive training for, and agree to follow the procedure described in this SOP.

3. Definitions:
3.1.1. **Biosafety Level 2 [BSL-2]**: Practices, equipment and facility design and construction [that] are applicable to clinical, diagnostic, teaching and other laboratories in which work is done with the broad spectrum of indigenous moderate-risk agents that are present in the community and associated with human diseases of varying severity. With good microbiological techniques, these agents can be used safely in activities conducted on the open bench, provided the potential for producing splashes or aerosols is low. The salmonellae and *Toxoplasmosis spp.* are representative of microorganisms assigned to this containment level. *(ref: Biosafety in Microbiological and Biomedical Laboratories, 5th Edition)*

3.1.2. Primary Hazards to personnel working with these agents relate to accidental percutaneous or mucous membrane exposures, or ingestion of infectious materials. Extreme caution should be taken with contaminated needles or sharp instruments. Even though organisms routinely manipulated at Biosafety Level 2 are not known to be transmissible by the aerosol route, procedures with aerosol or high splash potential that may increase the risk of such personnel exposure must be conducted in primary containment equipment, or in devices such as a BSC or safety centrifuge cups. Other primary barriers should be used as appropriate, such as splash shields, face protection, gowns and gloves.

3.2. **Biosafety Level 3 [BSL-3]**: Practices, equipment and facility design and construction [that] are applicable to clinical, diagnostic, teaching, research or production facilities in which work is done with indigenous or exotic agents with a potential for respiratory transmission, and which may cause serious and potentially lethal infection. *Mycobacterium tuberculosis*, St. Louis encephalitis virus, and *Coxiella burnetii* are representative of the microorganisms assigned to this level. Primary hazards to personnel working with these agents relate to autoinoculation, ingestion and exposure to infectious aerosols.* *(ref: Biosafety in Microbiological and Biomedical Laboratories, 5th Edition)*

3.2.1. **BSL-3 Necropsy Lab ‘not hot’ status**: This indicates that the lab is decontaminated and not operating under BSL-3 procedures.

3.2.2. **BSL-3 Necropsy Lab ‘hot’ status**: This indicates that the lab is certified for BSL-3 use and is operating with BSL-3 procedures.

3.3. **Biohazard levels in the BSL-2 Necropsy Lab:**

3.3.1. **Biohazard level yellow** stipulates the requirements for PPE when the lab contains exposed animal or potentially infectious materials that necessitate wearing lab dedicated boots or shoe covers, coveralls or lab coat, safety glasses or goggles and nitrile exam gloves (optional cut-resistant gloves).
3.3.2. **Biohazard level red** stipulates the requirements for PPE when the lab contains airborne infectious agents or when procedures are creating aerosols. PPE requirements at red level are all of those for yellow level plus respiratory protection with N95 filtering face-piece respirators.

3.4. **High-risk specimens**: Among the infectious agents defined above, there are some that pose a greater than normal risk for transmission to humans in the laboratory.

3.4.1. Human diagnostic samples will not be tested. Confer with the Section Manager, pathologist assigned the case, and/or the laboratory director if a human diagnostic sample is received in the Necropsy section.

4. **Equipment and Material:**

4.1. Biosafety Cabinet NEC.EQ.99 (Room 173)

4.2. Chemicals: Disinfectants including but not limited to Synergize (quaternary ammonia/glutaraldehyde), Spartan TBcide or other disinfetcant specifically effective against *Mycobacterium bovis*, 10% bleach, 70% ethanol, Environ LpH for prions, Quat 64 or Vedco P128 (quaternary ammonia disinfectants for eye glasses/goggles), general purpose detergents and other cleaning agents. The pathologist or Section Manager will determine the appropriate disinfectant based on the suspected agents present in the lab and communicate this to staff responsible for lab cleaning and decontamination. All disinfectants will used at the dilution and contact time recommended by the manufacturer. If contact time is not specified, then a minimum of 30 minutes will be standard.

5. **Safety:**

5.1. Training for this procedure includes review of hazards and accident prevention, personal protective equipment (PPE) and other safety requirements based on potential risks associated with this procedure. Specific requirements may be found in the body of this document. University of Minnesota safety information and safety policies are available from University Health and Safety (UHS) on their website [www.uhs.umn.edu](http://www.uhs.umn.edu). All biological, chemical and radioactive waste is disposed of according to state, federal and U of M requirements as found at [https://dehs.umn.edu/hazardous-waste-disposal-procedures](https://dehs.umn.edu/hazardous-waste-disposal-procedures), "Hazardous Waste Disposal Procedures".

5.2. Biosafety Level 2

5.3. Safety Data Sheets (SDS) and / or Material Safety Data Sheets (MSDS) are available in the binder in VDL Room #167.

5.4. Specific PPE Required: Exam gloves, laboratory uniform, dedicated lab boots and eye protection should be worn while handling carcasses and all specimens. When airborne infectious agents may be present, respiratory protection is used. (See "NEC.SOP.041, Safety in BSL-2 and BSL-3 Necropsy Labs")

5.5. **Hazards:**

5.5.1. Chemical: Refer to "NEC.SOP.005, Chemical Spill Kit"

5.5.1.1. Formaldehyde

5.5.1.2. Decalifier

5.5.1.3. Absolute Alcohol

5.5.1.4. Disinfectants/Degreasers

5.5.2. Physical: Refer to "NEC.SOP.040, Necropsy Sharps Safety and Decontamination"

5.5.3. Biological: See below SOP procedure

5.6. **Occupational Health Recommendations:**

5.6.1. Tetanus vaccination every 10 years

5.6.2. Rabies vaccination and biennial titer

5.6.3. Annual TB skin test

5.6.4. Annual respirator fit test

5.7. Accident / Exposure Response
5.7.1. Consult SAFETY.REF.001, VDL Emergency Information, for appropriate response to Serious Incidents

5.7.2. Copies of Serious incident reports should also be sent to the VDL Director and DSO.

6. Training:
Laboratory personnel will receive training and will follow appropriate document review schedule. Training status is maintained within the sections or retained in Q-Pulse.

7. Procedure:
7.1. Risk assessment of specimens and associated PPE.
7.1.1. Before specimens are processed or necropsies performed on cases submitted to the BSL-2 or BSL-3 Necropsy Lab, a risk assessment will be performed by the responsible individual (i.e. pathologist, senior resident, section manager, or authorized parapathologist/scientist) who has been assigned responsibility for managing the case. In cases where the risk is difficult to determine, the VDL director will decide the appropriate course of action. (For BSL-3 suspects see “NEC.SOP.057, BSL-3 Specimen Receiving: Identification and Communication”). Based on this assessment, a biosafety level will be assigned and appropriate health and safety measures determined for safe handling of the specimen. The following risk factors will be considered: potential infectious agents (e.g. select agents, higher risk zoonotic agents such as Coxiella burnetti, Brucella, tuberculosis, Francisella tularensis (tularemia), herpes B virus, Baecillus anthracis (Anthrax), or rabies), potential procedures that aerosolize pathogens, categories of species and their increased likelihood for serious or unpredictable zoonoses such as some wildlife or exotic species and nonhuman primates (NHP).

7.1.2. Normally, BSL-2 cases involving production and companion animals will be processed in the BSL-2 Necropsy Lab with standard PPE listed in 5.4. Impermeable (plastic, rubber, etc.) aprons and cut-resistant gloves are optional depending on the need. If respiratory hazards will be possible, then disposable N95 filtering face-piece respirators will be required of everyone in the lab while those procedures or specimens are in process.

7.1.3. Higher risk specimens: Potentially serious or highly contagious zoonoses suspected (i.e. history-based suspicion, regulatory agency investigation) or unknown risk in specimens that are determined not to be known BSL-3 suspects.

7.1.3.1. Specimens must be processed by trained, knowledgeable personnel (not students) in one of the following areas: a biosafety cabinet, the BSL-3 Lab operating at “not hot” status, or in room 173.

7.1.3.2. For the not hot BSL-3 lab and room 173, the PPE in 7.1.2 must be worn with the addition of:

7.1.3.2.1. Respiratory protection if potential exists for procedures creating aerosols (splash, sawing, etc.) or aerosol concern infectious agents (e.g. Francisella tularensis (tularemia), Coxiella burnetti, tuberculosis, Brucella).

7.1.3.2.2. Double gloves with a cut resistant glove between layers of exam gloves on the non-dominant hand.

7.1.3.2.3. Impermeable apron for animals ≤ to 5 kg or Tyvek/Kleenguard type coveralls >5kg.

7.1.3.4. Face shield in place of safety glasses.

7.1.3.3. Cases of cats with a history consistent with the potential for Francisella tularensis (tularemia) infection or wild muskrats, beavers, squirrels, chipmunks, and lagomorphs (during “tularemia season”, ~May-November) will require that the necropsy process begins in the manner
described in 7.1.3.1 to rule out lesions consistent with a tularemia infection. Those that do not appear to be infected may be completed at a BSL-2 level.

7.1.3.4. The uteri of pregnant sheep, goats, and canines (including wildlife) will be tied off with string or zip-tied in a manner that allows the uterus to be removed with the fetuses and uterine fluids contained and processed per 7.1.3.1. The uterus will be processed in a manner referenced in "NEC.SOP.049".

7.1.3.4.1. Exceptions are to be made in the occurrence of teaching and demonstration labs that include previously healthy animals sacrificed for the purpose of the lab. Responsible parties of the lab are to inform participants of any potential health risks, be aware of disease indicative lesions during the processing of reproductive tissues, and take proper precautions upon discovery of suspect lesions.

7.1.3.5. Animals suspected to be infected with Bacillus anthracis (Anthrax):

7.1.3.5.1. Tissue cases

7.1.3.5.1.1. To be processed in a BSL-2 manner while taking precautions to reduce/eliminate aerosol production. Waste tissues will be bagged in digestible bags prior to disposal. Work surfaces and tools will be cleaned with 10% bleach with a 20 minute minimum contact time.

7.1.3.5.2. Whole body necropsies

7.1.3.5.2.1. A blood swab should be taken prior to necropsy to culture for anthrax.

7.1.3.5.2.2. Carcasses that are processed are to be cordoned off in a similar manner as tuberculosis suspects (See NEC.SOP.015 Sample Processing, Tuberculosis Suspect Livestock). The carcass will be soaked in 10% bleach for 20 minutes prior to manipulating. Minimal processing of the carcass will occur to collect samples. The carcass will go directly to the digester if possible and efforts to contain biological fluids will be taken. The carcass will be labeled as an “ANTHRAX SUSPECT” and efforts will be taken to contain the carcass in the walk-in cooler if the digester is not immediately available. Work surfaces and tools will be cleaned with 10% bleach with a 20 minute minimum contact time.

7.1.3.6. Photography of high risk specimens/samples in the photo room is allowed with the proper precautions.

7.1.3.6.1. Specimens/samples must be contained (e.g. plastic bag, screw-top container) during the transfer to and from the area where the necropsy is performed and the photo room.

7.1.3.6.2. Specimens/samples may be removed from containment during photograph.

7.1.3.6.3. Proper PPE must be worn by all people in the photo room while photographs are being taken and until the specimen/sample is contained and the area is disinfected.

7.1.3.6.4. Effort must be taken to reduce biological material on the photo glass. The photo glass must be properly disinfected prior to staff returning to the area that the necropsy is performed.

7.1.3.7. If high risk specimens are processed outside of aforementioned procedures:

7.1.3.7.1. The necropsy must stop.
7.1.3.7.2. The specimen and associated materials are to be contained quickly (e.g. bagged, moved to a BSC, moved to an isolated room).

7.1.3.7.3. The work area and tools are to be disinfected with appropriate disinfectant according to the potential pathogen(s) of risk.

7.1.3.7.4. The potential risk must be communicated to all people in the space (see 7.2).

7.1.4. BSL-3 specimens will always be handled in the BSL-3 Lab when it is certified and operational at “hot” status. PPE requirements and specimen handling procedures in the BSL-3 Necropsy Lab (NL) are stipulated in “NEC.SOP.017” and “NEC.SOP.018”. Conversion from BSL-2 procedures to BSL-3 procedures in the BSL-3 NL is outlined in “NEC.SOP.034”.

7.1.5. Animals with contrast media (Barium, etc.)

7.1.5.1. Necropsies can be completed as a usual BSL-2 specimen.

7.1.5.2. Tissues with infused contrast media can be handled as usual.

7.1.5.3. Free-flowing contrast media (i.e. in the GI system) must be collected in a container and added to the CWD formalin container for digestion.


7.1.6.1. Necropsies can be completed as a usual BSL-2 specimen.

7.1.6.2. The submitter should indicate the type and date of treatment.

7.1.6.3. Concern lasts approximately 3 weeks post-treatment. Women who are pregnant are of greatest exposure concern.

7.1.6.4. VMC Radiology will:

7.1.6.4.1. Collect and store remains post-necropsy.

7.1.6.4.2. Measure radiation levels in the area of the necropsy and where saved fixed and fresh tissues are stored.

7.1.6.4.3. Collect saved fresh and fixed tissues after case is completed.

7.1.7. Necropsies of venomous animals

7.1.7.1. Necropsy should be performed by faculty, resident, and/or full-time staff (e.g. no students).

7.1.7.2. Ensure all animals are dead prior to proceeding and be aware that dead animals are/can still be venomous.

7.1.7.3. Necropsy of venomous fish:

7.1.7.3.1. Teleosts (boney fish) envenomate via spines on dorsal and/or pectoral fins. For safety these can be removed with shears/scissors prior to any other assessment.

7.1.7.3.2. For stingrays, trauma is generally of greater concern than envenomation, so ensuring the animal is dead is the primary safety procedure.

7.1.7.3.2.1. Thick (duct) tape or taping of a syringe case over the spine(s) is adequate to preclude envenomation. Removal of the distal tail can also be employed.

7.1.7.4. Necropsy of venomous amphibians:

7.1.7.4.1. Amphibians are generally toxic due to cutaneous secretions. Of primary importance then, is strict adherence to routine personal protective measures in the form of intact barriers (gloves). Otherwise necropsy can proceed as usual.

7.1.7.4.2. In most zoo species, toxicity is lost rapidly upon entry into captivity and will not be present at all in captive-produced species so the possibility of toxicosis is low, existing only in very recently imported specimens.

7.1.7.5. Necropsy of venomous reptiles:

7.1.7.5.1. As most venoms are absorbed by injection or through mucus membranes, double gloves and face shield/goggles are required.

7.1.7.5.2. Remove head first using forceps & shears; do not handle the head with your hands. Immerse in formalin immediately. Formalin will inactivate most venoms.

7.1.7.5.3. Dissect out the brain after fixation.
7.1.7.5.4. After removal of the head, use caution and proceed with remainder of the necropsy. Some venom may be present within the GI tract.

7.1.7.6. Identify formalin containers, tissue samples, cultures etc. as being from a venomous animal.

7.1.7.7. If envenomation occurs:

7.1.7.7.1. Immediately notify Necropsy Section Head or Designee and assigned pathologist with species/common name of animal, time of envenomation, location of bite/puncture/exposure, and current status.

7.1.7.7.2. Immediately stop necropsy procedure.

7.1.7.7.3. General procedures prior to arrival of emergency personnel:

7.1.7.7.3.1. The victim should sit or lie down and remove any constrictive clothing or jewelry.

7.1.7.7.3.2. Keep the victim still, quiet and warm.

7.1.7.7.3.3. Do not apply a tourniquet, ice or first aid to the wound.

7.1.7.7.3.4. Do not move the victim or give the victim anything to drink.

7.2. Communication of risk

7.2.1. Before procedures are begun, the responsible individual (see 7.1.1.) will communicate the risk assessment and safety requirements to all individuals who will occupy the same space (BSL-2 Necropsy Lab, Room 165, or associated lab spaces such as the photo lab, Room 167, necropsy office, etc.) while the procedures are being performed. The responsible individual will also ensure that signs at the entrances indicate the current required biohazard protection (yellow or red level).

7.2.2. During the procedures, the responsible individuals will monitor the lab occupants to make sure that all are observing the necessary procedures and using the required PPE. Other authorized staff or students seeking admittance to the lab during such times will be notified of PPE requirements. Authorized visitors will be logged in at the lab entrances, escorted by authorized staff, notified of risks and safety requirements. They will be provided with and required to use appropriate PPE while in the lab. When leaving the lab, they will be instructed in removal and handling of PPE and hand sanitizing. See “NEC.SOP.073” for complete visitor access policy.

7.2.3. High risk specimens being transported for testing within the Necropsy Section or to other labs within or outside the VDL will be labeled with a red or orange biohazard sticker indicating the suspected risk.

7.2.4. If necropsy cases are determined to require rabies virus testing and the submission form and data entry forms have not been previously stamped with the "RABIES" stamp by Lab Receiving (See REC.SOP.005), all submission forms and data entry forms must be stamped with the "RABIES" stamp along the right margin prior to any copies being made and any samples being submitted to other sections.

7.3. Airborne hazards and aerosol containment: Excessive production of bioaerosols results in greater potential for exposure risk to personnel and potential cross contamination of specimens for sensitive tests such as PCR. When airborne hazards are present, the BSL-2 NL will operate at red hazard level. Aerosol production will be contained and exposure potential will be mitigated by the following.

7.3.1. Electric saws -- Use small saws in a biosafety cabinet (BSC) if available. When larger hand-held saws are used, all individuals in the room will wear eye/face protection and a respirator in addition to the minimum PPE.

7.3.2. Suspect high risk specimens -- If specimen size permits, use a BSC for containment of aerosols from these specimens. See 7.1.3.

7.3.3. High pressure hoses -- Be aware that aerosols may be a source of cross contamination of specimens for sensitive tests such as PCR.

7.4. Sharps hazards -- See “NEC.SOP.040, Necropsy Sharps Safety”

7.5. Injuries or potential exposures:

7.5.1. The U of M Workers Compensation (U of M Office of Risk Management and Insurance, 612-625-0062, orm@umn.edu) injury reporting system is used for documenting and reporting suspected or known injuries. For additional information, see “NEC.SOP.073, NEC115, NEC130, NEC140.”
exposures or injuries. Employees fill out the Employee Incident Report, supervisors fill out the First Report of Injury and the Supervisor Incident Investigation. In case of serious incidents, the following will be notified: the Director of the Veterinary Diagnostic Lab, the College of Veterinary Medicine Dean’s Office using the CVM Serious Incident Report Form and Policy, the U of M AHC Emergency Response Team (www.ahc.umn.edu/about/admin/oer, director: 612-625-3958), the Department of Environmental Health and Safety (612-626-6002) and the Office of Occupational Health and Safety (612-626-5008, uohs@umn.edu). The VDL Director or authorized designee will be responsible for ensuring that this notification occurs. The notification will include a description of the incident, individuals directly involved or reliable witnesses, and the nature of actual or potential harm, injury, exposure, liability or risk of negative publicity.

7.5.2. Non-human primate (NHP) exposures:

7.5.2.1. If a cut/cutaneous exposure occurs on a NHP specimen, reference the NHP Bite Kit located under the west counter in Room 167A. Instructions and supplies are located within the kit.

7.5.2.2. The kit shall be checked every 6 months by the section head or designee to ensure supplies are up to date.

7.5.2.3. Samples must be taken from the nonhuman primate (NHP) upon potential human exposure event, regardless of how long it has been since the animal died or was euthanized.

7.5.2.4. Collect supplies needed to obtain samples (viral isolation swabs and tubes containing media).

7.5.2.5. Use two swabs to collect samples from the NHP for viral isolation:

7.5.2.5.1. Swab both eyes (conjunctiva) and then the genitals with one swab.

7.5.2.5.2. Swab the oral mucocutaneous junction (lips) and oral cavity with a second swab.

7.5.2.6. Insert each swab into a separate tube of viral media. Break off the extra length of the stick and tightly screw on the cap.

7.5.2.7. Label each tube with the animal’s RAR ID (if an RAR animal), date, and collection site location (ie. eye/genital or mouth).

7.5.2.8. Double bag the samples and clearly identify them as a NHP biohazard to prevent the sample processor from being exposed.

7.5.2.9. If an RAR animal:

7.5.2.9.1. Include a RAR Diagnostic Laboratory Submission Form.

7.5.2.9.2. Take samples to the St Paul RAR office area refrigerator (VTH E311-321, Animal Resource Facilities, RAR) for pick up and transport to the RAR Diagnostic Lab on the Minneapolis campus.

7.5.2.9.2.1. Alternatively, RAR staff may meet you at the VDL to pick up the samples.

7.5.2.9.2.2. If samples cannot be given to RAR on the day of collection, place samples for viral isolation in a refrigerator until the following business day.

7.5.2.9.3. Page the St Paul veterinary technician at 612-589-5939 to notify them of the exposure and that you have samples for processing.

7.5.2.9.4. Work with the RAR veterinary technician to complete the required information on the RAR Diagnostic Laboratory Submission Form.

7.5.2.9.5. The St Paul veterinary technician will coordinate sample transport to the RAR Diagnostic Lab with the RAR truck driver and processing of the samples with the RAR Diagnostic Lab veterinary technician.

7.5.2.9.6. If the St Paul veterinary technician is out of office, page the St Paul veterinarian at 612-589-3286 or supervisor at 612-589-4956 to coordinate the transport and processing.

7.5.2.9.7. Email the following RAR personnel regarding the exposure incident:
7.5.2.9.7.1. Assistant director, sivu0003@umn.edu
7.5.2.9.7.2. St Paul veterinarian, acraig@umn.edu
7.5.2.9.7.3. St Paul veterinary technician, dmdeters@umn.edu
7.5.2.9.7.4. RAR training coordinator, smmay@umn.edu
7.5.2.9.7.5. Be sure to include the full name of the person exposed, their affiliation (VDL), the NHP ID, and a brief description of the incident or injury in your report. This information is needed for tracking results.

7.5.2.9.8. Training coordinator will record the incident in the NHP Exposure Log stored in PWB B-305B.
7.5.2.9.9. Assistant directory will notify UOHS of the exposure.
7.5.2.9.10. The RAR Diagnostic Lab veterinary technician will ship samples to VRL Laboratories-USA. Samples should be shipped same day, if possible or no later than 24 hrs post collection.

7.5.2.9.11. See 7.5.2.9.2 above for how to prepare samples not shipped the same day.
7.5.2.9.12. Viral swab tube samples not shipped the same day must be shipped using ice packs.
7.5.2.9.13. The RAR Diagnostic Lab veterinary technician will send the reported test results to the RAR assistant director, St Paul veterinarian, St Paul veterinary technician, and training coordinator.
7.5.2.9.13.1. The training coordinator will record test results in the NHP Exposure Log.
7.5.2.9.13.2. The St. Paul veterinarian or veterinary technician will inform exposed person of the result.

7.5.2.10. If not an RAR animal, send samples directly to VRL Laboratories-USA. Samples should be shipped same day, if possible or no later than 24 hrs post collection.
7.5.2.10.1. See 7.5.2.9.2 above for how to prepare samples not shipped the same day.
7.5.2.10.2. Viral swab tube samples not shipped the same day must be shipped using ice packs.

8. Acceptance Criteria: N/A

9. Interpretation of Results: N/A

10. References:
10.1. BSL references
10.2. Coxiella burnetti, Francisella tularensis, NHPs, Herpes B virus, tuberculosis
10.3. Coxiella burnetti, Brucella sp, Bacillus anthracis
10.4. Coxiella burnetti


10.5. Francisella tularensis, Brucella sp,

10.6. Bacillus anthracis

10.6.2. https://www.avma.org/KB/Resources/LiteratureReviews/Pages/Anthrax-facts.aspx

10.7. NEC.SOP.005, Chemical Spill Kit
10.8. NEC.SOP.015, Tuberculosis Suspect Livestock
10.9. NEC.SOP.017, BSL-3 Necropsy Lab Specimen Handling
10.10. NEC.SOP.018, BSL-3 Necropsy Lab Personnel Entry and Exit Procedures
10.11. NEC.SOP.033, BSL-3 Necropsy Lab Decontamination
10.12. NEC.SOP.034, BSL-3 Necropsy Lab Conversion from BSL-2 Procedures to BSL-3 Procedures
10.13. NEC.SOP.040, Necropsy Sharps Safety
10.14. NEC.SOP.049, Abortion Specimens
10.15. NEC.SOP.053, BSL-3 Sharps Safety
10.16. NEC.SOP.057, BSL-3 Specimen Receiving: Identification and Communication
10.17. NEC.SOP.058, BSL-3 Suspect Receiving, Containment, Transport and Decontamination
10.18. NEC.SOP.073 Necropsy Lab Access Policy
10.20. Worker’s Compensation Reporting Procedures and Forms (U of M Office of Risk Management): http://www.policy.umn.edu/Policies/hr/Benefits/WORKERSCOMP.html
University of Minnesota Veterinary Diagnostic Lab (UMVDL)

BSL-2 Necropsy Lab Safety Requirements

Anyone seeking access to the Necropsy Lab will be required to observe the following rules.

Visitors

Anyone other than UMVDL Staff and Faculty and certain U of M Staff (e.g. FM personnel, EM personnel, BSL-3 program staff) will be required to be escorted by authorized staff members in order to enter the Necropsy Lab. This will include VMC and other U of M staff and students, animal owners, U of M Facilities Management staff, researchers and all non-university visitors and contract workers. All visitors will need to log in at one of the two entrances.

Hazard Levels

Colored signs at the entrances to the Necropsy Lab will indicate the hazard level and minimum personal protective equipment (PPE) which will be provided by the VDL unless visitors are adequately attired. The required PPE for the two hazard levels are detailed below.

**Yellow Level:** necropsy boots or disposable plastic boots over other footwear, eye protection, lab coat or coveralls, and exam gloves

**Red Level:** necropsy boots or disposable plastic boots over other footwear, eye protection, lab coat or coveralls, exam gloves, and a minimum of an N95 respirator.

Note: Respirator use may be contraindicated with certain medical conditions. If not able to wear a respirator, you may be prevented from accessing the lab during red level.

The hazard level may change while you are in the lab. You will be notified of the change and required to adjust to the new PPE requirements in effect.

See NEC.SOP.041 for additional information about these safety procedures.