1. Purpose:
The purpose of this SOP is to give instructions for handling sharps, cleaning/disinfecting sharps, and disposing properly of sharps.

2. Responsibility:
It is the responsibility of the VDL Section Head 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. Sharps: Objects that can penetrate the skin including - not limited to, needles, scalpels, knives, scissors, saw blades, slides, pipettes and broken glass/tubes. In the Necropsy Lab such items are assumed to be potentially contaminated and can induce sub-dermal inoculation of infectious agents.

4. Equipment and Material:
4.1. Autoclave
4.2. Sharps containers (puncture resistant, color coded red and/or labeled with a biohazard warning label, leak-proof on sides and bottom and closable)
4.3. Disinfectants such as Synergize (quaternary ammonia/gluteraldehyde), 10% solution of household bleach, or phenolic disinfectant such as TBCide Plus (used only for TB suspects).

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.dehs.umn.edu. All biological, chemical and radioactive waste is disposed of according to state, federal and U of M requirements as found at www.dehs.umn.edu “Hazardous Waste.”
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 appropriate cut-resistant gloves can be used when handling sharps. 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. Decalcifier
5.5.1.3. Absolute Alcohol
5.5.1.4. Disinfectants/Degreasers
5.5.2. Physical: Refer to the U of M Biosafety Manual - www.dehs.umn.edu, sections on “Sharps Safety” and “Basics Fact Sheet – Safe Sharps Handling”.

5.5.3. Biological:
   5.5.3.1. Refer to "NEC.SOP.041, Safety in the BSL-2 Necropsy Lab"
   5.5.3.2. U of M Bloodborne and Other Pathogens Exposure Control Plan, U of M Infectious and Pathological Waste Management Plan

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. Handling Sharps
       7.1.1. Hypodermic needles must not be bent, sheared, broken or otherwise manipulated before disposal in sharps containers. Avoid recapping needles. If a syringe with contents must be submitted for test procedures, remove the needle by mechanical means and cap the syringe to prevent leakage or contamination.
       7.1.2. Do not pick up broken glass with hands. Use mechanical means such as a brush and dust pan, tongs or forceps.
       7.1.3. Use care with knives or scalpels in tissue dissection. The opposing hand should be kept out of the line of trajectory of the cut.
       7.1.4. When using the band saw, never place hands directly in front of the moving saw blade. Instead they should be at a safe distance to the side, or use mechanical means such as pushing or holding tools to guide smaller specimens into the blade.
   7.2. Cleaning/Disinfecting Sharps
       7.2.1. All disinfectants will be 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.
       7.2.2. After each case, clean reusable tools such as knives, scissors, forceps, and handheld saws in a suitable disinfectant appropriate to the type of material and suspected infectious agents.
   7.3. Disposing of Sharps
7.3.1. All disposable sharps, including scalpels, hypodermic needles and saw blades, should be disposed in sharps containers.

7.3.2. Ensure the sharps container is not filled above the fill line (3/4 full) indicated on the outside of the container.

7.3.3. When full, seal the container and place it in a red bag in a gray biohazard waste barrel to be picked up by the U of M medical waste system.

8. Acceptance Criteria:
   N/A

9. Interpretation of Results:
   N/A

10. References:
    10.1. U of M Bloodborne and Other Pathogens Exposure Control Plan
    10.2. U of M Infectious and Pathological Waste Management Plan
          10.3.1. “Sharps Safety”
          10.3.2. “Basics Fact Sheet – Safe Sharps Handling”
    10.4. NEC.SOP.005, Chemical Spill Kit
    10.5. NEC.SOP.041, Safety in BSL-2 and BSL-3 Necropsy Labs