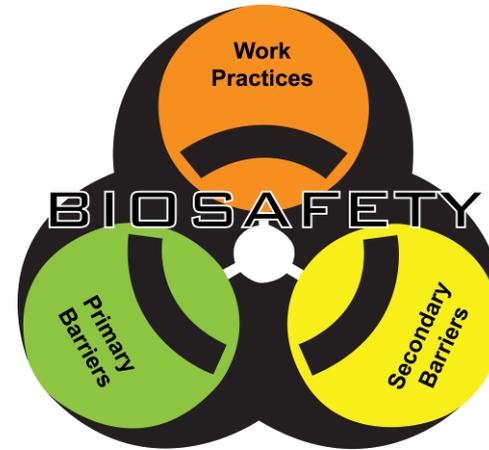
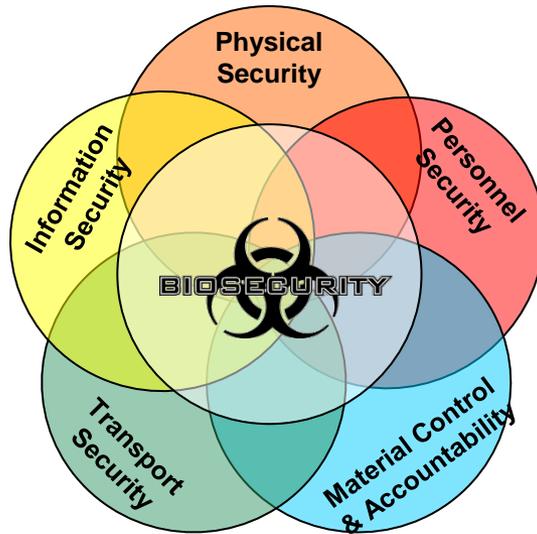




# Waste handling



## ***Controlling Laboratory Biorisks Training Course***

**International Biological Threat Reduction Program**

**Global Security Programs**

**Sandia National Laboratories**

**Albuquerque, NM USA**



SAND No. 2008-0480P

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.



# AMP Model

Biorisk Management  
Assessment **Mitigation** Performance



# Learning Objectives

- **Be able to discuss appropriate waste handling methods, and to identify hazards and limitations of each method.**
- **Be able to explain the proper collection, processing, and disposal of waste.**
- **Be able to describe the process to develop waste handling standard operating procedures and validation methods.**



- **What kinds of waste exist in the laboratory?**
  - Write one type of waste per *post-it note*
  
- **Categorized the waste into groups**
  - What are the risks for each of the categories of waste you determined?



# Definitions

- **Sterilization** - act or process, physical or chemical, that destroys or eliminates all forms of life, especially microorganisms
- **Disinfectant** - an agent, usually chemical, that inactivates viruses or kills vegetative microbes
  - Removes ability (or disables) ability to infect
- **Antiseptic** - a substance that prevents or arrests the growth or action of microbes, either by inhibiting their activity or by destroying them
  - Septic – containing disease causing organism, anti - remove
- **Decontamination** - disinfection or sterilization of contaminated articles to make them suitable for use
  - Remove contamination



- **Based upon those risks and waste categories you created, what will you process as infectious waste and how?**
  - How is waste collected inside the laboratory?
  - How is waste processed before, or as it is leaving the laboratory?
  - How is waste dispose?
  - How is the process validated?



- **How in a typical laboratory do you sterilize? (Discuss in your group methods you use and write them on your flip chart)**
  - Also discuss key considerations, concerns, and validation methods.
  
- **How in a typical laboratory do you disinfect? (Discuss in your group methods you use and write them on your flip chart)**
  - Also discuss key considerations, concerns, and validation methods.
  
- **How in a typical laboratory do you decontaminate? (Discuss in your group methods you use and write them on your flip chart)**
  - Also discuss key considerations, concerns, and validation methods.



- **In your group, outline the key elements as identified for your assigned example.**
  - Example 1: In your group, identify when you would use an autoclave and outline the key elements for a standard operating procedure
  - Example 2: In your group, identify when you would use a surface disinfectant and outline the key elements for a standard operating procedure.
  - Example 3: In your group, identify when you would do an area decontamination and outline the key elements for conducting a large area decontamination
  - Example 4: In your group, identify when you might have infectious waste which needs to leave the laboratory area



- **Complete the table on selecting a disinfectant and be prepared to discuss your answers**



# Summary

- **What are some of the key considerations of waste handling?**