

University of Nevada, Reno Operational Plan for Management of Biohazardous Waste

Scope

This operational plan covers management of biohazardous waste produced as a result of University of Nevada, Reno (UNR) operations conducted on the main campus in Reno, as well as satellite operations in the Reno/Sparks area. Only biohazardous waste produced by UNR operations is treated at UNR facilities. Biohazardous waste produced by other entities (non-UNR operations) is not handled or treated by UNR.

Biohazardous Waste Streams

The following biohazardous waste streams are produced as a result of university operations:

- Cultures and stocks of microorganisms and biologicals, and materials contaminated with these agents, are produced by teaching, research, and diagnostic laboratories
- Human blood and body fluids, and materials contaminated with these fluids, from clinical facilities, research, athletics, and personnel injuries
- Human tissues and other anatomical wastes resulting from teaching, research, and clinical diagnostic activities
- Contaminated animal carcasses, body parts, animal bedding, and related wastes from laboratory and field research
- Sharps produced by clinical and laboratory research activities

Management and Treatment of Biohazardous Waste

Cultures and Stock of Microorganisms and Biologicals

Microbiological waste, to include potentially contaminated materials such as gloves, pipette tips, and absorbent work pads, is collected by laboratory workers at the site of generation in designated containers labeled with the biohazard symbol. Solid wastes contaminated with these materials are collected in autoclavable biohazardous waste bags; liquid wastes are collected in solid, leak-proof containers. The majority of microbiological waste produced is not known to be infectious to humans or other animals; however, as prudent practice all microbiological waste is sterilized prior to disposal due to possible unidentified pathogens, and to maintain consistency in the treatment of microbiological wastes.

When local biohazardous waste receptacles are filled, or a particular activity is completed, laboratory personnel remove waste from the immediate work area for treatment and disposal.

Microbiological cultures and stocks, and other potentially contaminated materials, are sterilized by autoclaving. These wastes are autoclaved for a minimum of 60 minutes at a minimum of 121 °C and 15 psi. These conditions have been shown through internal efficacy testing using *Bacillus stearothermophilus* spores to provide reliable sterilization of biohazardous waste. After autoclaving, waste is considered non-infectious and is disposed of as ordinary solid waste. Autoclaved waste bags should be placed in an opaque bag prior to placement in trash receptacles to avoid concerns that “biohazardous waste” (now non-infectious due to autoclaving) is being disposed of in ordinary solid waste receptacles.

Liquid cultures and stocks may also be treated by addition of bleach solution (sodium hypochlorite) at a final minimum concentration of 5000 ppm available chlorine (a 1/10 dilution of Chlorox or other domestic bleach solution) for a minimum time of 30 minutes. For liquid cultures or stocks that contain spore-forming pathogenic organisms, a freshly prepared 1/10 dilution of domestic bleach solution that has been acidified to a pH of 7 must be used. After treatment with bleach, the culture and bleach solution is disposed of to the sanitary sewer.

All biohazardous wastes that will be treated on-site must be treated within 96 hours after being identified for treatment and disposal.

Human Blood and Body Fluids

Solid wastes contaminated with human blood or body fluids are collected in autoclavable biohazardous waste bags; liquid wastes are collected in solid, leak-proof waste containers. Solid waste that is produced at the Student Health Center (Neil J. Redfield Building), Family Medicine Center (Brigham Building), Athletics (Cashell Field House) and the Health and Recreation Building (Lombardi Building) is picked up on a weekly basis by a local biohazardous waste contractor (Waste Management). The contractor transports the waste to its facility where it is sterilized by autoclaving. The sterilized waste is then transported to the local landfill and buried.

Solid wastes contaminated with blood or body fluids are also produced at the Orvis Nursing Clinic located inside the Nelson Building at 401 W. Second Street. This waste is picked up by a local biohazardous waste contractor (Waste Management) when waste receptacles are filled.

Liquid blood and body fluid waste is disposed of directly to the sanitary sewer system. Pre-treatment with bleach solution is not required for disposal to the sanitary sewer; however, some groups choose to do this in order to reduce the risk of accidental exposure to personnel during disposal and either procedure is acceptable. Blood disposed of to the sanitary sewer is generally contained in laboratory-type tubes with the total volume generally less than a few hundred milliliters at a single disposal. These liquids may also be sterilized on-site using a steam autoclave (minimum of 60 minutes at a minimum of 121 °C and 15 psi), after which the waste is disposed of to the sanitary sewer or as ordinary solid waste. Secondary containers are required for transport of human blood or body fluids through public access areas (research, testing, and clinical laboratory areas).

are not generally considered to be general access areas). All human blood and body fluid wastes to be treated on-site must be treated within 96 hours after being identified for treatment and disposal.

On infrequent occasions, for example when there is a large volume of fluid or a large number of containers to dispose of, human blood or body fluids or solid waste contaminated with these materials may be disposed of through a local biohazardous waste contractor (Waste Management).

Human Cadavers and Human Anatomical Waste

The University of Nevada School of Medicine (UNSOM) provides cadavers to UNR anatomy teaching programs and NSHE institutions as follows:

- University of Nevada School of Medicine: 16 cadavers per year
- UNR Biology Department: 2 cadavers per year
- Great Basin College: 2 cadavers total per year; 1 cadaver per year for the Elko campus and 1 cadaver per year for the Winnemucca campus
- Truckee Meadows Community College: 2 cadavers per year
- Western Nevada College: 2 cadavers per year

Cadavers are obtained through the UNSOM Anatomical Donation; however, cadavers can be obtained from other authorized donation programs if the need arises. The acquisition, use, and disposal of cadavers and human body parts is regulated by the Nevada State Anatomical Board. Burial transit permits and cremation certificates are required by State regulations for transport and cremation of cadavers.

Cadavers are embalmed at a licensed facility (normally at one of the local mortuaries listed below) and then transferred to the UNSOM with the burial permit, which is kept in each specific donor's file until cremation of the body.

Disposal of cadavers and anatomical waste is coordinated by the UNSOM Director of Anatomy Laboratory Operations. Cadavers used at locations outside of the UNSOM are transferred back to the UNSOM gross anatomy laboratory and then transported by a local mortuary to their facility for cremation. Cadavers and human anatomical waste from the UNSOM are picked up directly at the gross anatomy laboratory by a local mortuary and transported to their facility for cremation. Each cadaver is accompanied by its burial transit permit and cremation certificate. The following mortuaries and crematories are currently used:

- Walton's Funeral Home and Sierra Crematory
875 West 2nd Street, Reno, NV 89503
- Mt. View Funeral Home
425 Stocker Ave., Reno, NV 89503

After cremation, copies of the burial transit permit and cremation certificate are maintained in each donor's file by the UNSOM Anatomical Donation Program.

Contaminated Animal Carcasses, Body Parts, and Bedding and Related Wastes

Animal carcasses, body parts, and related wastes that are considered biohazardous are produced by laboratory research activities at the main campus and biomedical research activities at the Main Station Farm, which is located on the east side of the intersection of Mill Street and McCarran Boulevard. Disposal of animal carcasses, body parts, and related wastes generated on the main campus is coordinated by UNR Laboratory Animal Care Services (LACS). The Main Station Farm is under the administration of the Nevada Agriculture Experiment Station and disposal of biohazardous waste produced as a result of biomedical research activities at this facility is coordinated by Farm employees.

Campus Laboratory Research

Currently, mice are the only animals used in laboratory research that may be infected with organisms that are pathogenic to humans or other animals. A small amount of cynomolgus macaque monkey colon and uterus tissue are used in laboratory research and are considered potentially infectious. Mouse carcasses, tissues, and body parts, and monkey tissues are stored in plastic bags labeled with the biohazard symbol in -20°C freezers before transport to the LACS building where they are autoclaved on-site (a minimum of 2.5 hours at 121 C and 24 psi) prior to pick up by Reno Rendering, which transports the waste to the local land-fill for burial. The autoclave time for carcasses, tissue, and body parts is extended to 2.5 hours (vs. 60 minutes for other biohazardous waste) due to the lower heat transfer of these materials which makes it more difficult to achieve sufficient interior temperature.

Bedding and related wastes are produced in animal housing facilities located on the main campus in the Nellor Building, Fleischmann Agriculture Building, and the Applied Research Facility. These wastes are transported to the LACS facility in the Nellor Building and sterilized by autoclaving for 60 minutes at 121 C. After autoclaving, these materials are disposed of as ordinary solid waste.

Main Station Farm

The only waste currently produced at the Main Station Farm which may be biohazardous due to the high prevalence of *Coxiella burnetii* (the causative agent of Q fever) in sheep is waste from aborted sheep fetuses, including the fetus and placenta. Any such waste not consumed by the ewes is collected and stored at the Main Station Farm in a -20°C freezer prior to disposal at the Carson City landfill. Animal waste disposed of at the Carson City dump is transported by UNR Main Station Farm employees and the waste is directly buried in an area of the landfill designated for animal waste.

Sharps

Sharps are collected in rigid, leak-proof containers labeled with the biohazard symbol. Sharps waste produced by campus laboratories are autoclaved by laboratory personnel and then picked up by the Environmental Health and Safety Department (EH&S). Occasionally, laboratories may not have ready access to an autoclave and in these cases sharps are not autoclaved prior to pick up by EH&S. EH&S stores sharps waste at the Applied Research Facility (ARF) Annex 2 building until pick up by a local biohazardous waste contractor (Waste Management) who autoclaves the sharps and then disposes of

them at the local landfill. Sharps are picked up at the ARF Annex 2 facility by the biohazardous waste contractor on a monthly basis so that storage times are less than 30 days.

A local biohazardous waste contractor (Waste Management) picks up sharps and solid biohazardous waste from Athletics (Cashell Field House) and the Health and Recreation Building (Lombardi Building) on a weekly basis. The same contractor picks up sharps from the Nevada State Health Laboratory on a monthly basis (occasionally twice per month). The contractor transports the sharps to its facility where they are autoclaved and then disposed of at the local landfill.

Sharps waste produced at the Student Health Center (Neil J. Redfield Building), Family Medicine Center (Brigham Building), Orvis Nursing Clinic, and Main Station Farm are picked up by EH&S and staged at the ARF Annex 2 building for monthly pickup by a local biohazardous waste contractor (Waste Management).

All sharps are considered to be infectious, regardless of their source or whether or not they were autoclaved at the site of generation. The same health and safety precautions and handling and disposal procedures are applied to all sharps.

Accumulation of Biohazardous Waste

Solid biohazardous waste other than sharps is accumulated in autoclavable bags designed for biohazardous waste and labeled with the biohazard symbol. During accumulation, waste bags must be maintained in a stable and upright position, and in a manner that does not permit waste to fall out or be easily spilled. When accumulation of a particular biohazardous waste bag is completed it must be sealed to prevent spillage of the contents.

Sharps waste is accumulated in rigid, leak proof containers labeled with the biohazard symbol. In order to prevent needlesticks to personnel, sharps must not be removed from waste containers. When accumulation of a particular sharps container is completed, the opening must be closed and taped to prevent spillage of any contents. Whenever possible, sharps containers that are to be picked up by EH&S are to be autoclaved prior to their pick up.

Liquid biohazardous waste is accumulated in leak proof containers labeled with the biohazard symbol. Culture tubes, flasks, dishes, etc. used in laboratory procedures are not considered biohazardous waste containers unless laboratory personnel designate a particular container(s) for waste accumulation and/or treatment. Once this designation is made the container(s) must be labeled with a biohazard symbol. Labeling can also be accomplished by labeling a rack or other device used to hold the waste container(s), or by placing a biohazard symbol adjacent to the waste container(s) to clearly indicate the hazard.

Storage of Biohazardous Waste

All biohazardous waste, whether treated onsite by UNR personnel or transported by contractor to an off-site treatment facility, should be sterilized as soon as practical after

biohazardous waste containers are filled or after accumulation in a specific container is completed. In all cases, regulations specify that filled biohazardous waste containers cannot be stored for more than seven calendar days before on-site treatment or pickup for off-site treatment. There are two exceptions to this requirement: 1) biohazardous waste that is stored below 32 °F can be stored for up to 30 calendar days before being treated on-site or picked up for off-site treatment, and 2) sharps waste can be stored for up to 30 calendar days before being picked up for treatment, regardless of the storage temperature.

Biohazardous waste must not be stored in the same area as other types of wastes. Areas used to store biohazardous waste must be secured to prevent access by unauthorized personnel and must be labeled with the below wording located on, or adjacent to, the exterior of entry doors.

“CAUTION – BIOHAZARDOUS WASTE STORAGE AREA – UNAUTHORIZED PERSONS KEEP OUT” and

“CUIDADO – ZONA DE RESIDUOS INFECTADOS – PROHIBIDA LA ENTRADA A PERSONAS NO AUTHORIZADA”

Labeling of Biohazardous Waste

All biohazardous waste containers must be labeled with the biohazard symbol from the time that accumulation of waste begins, until the waste is treated and it is no longer considered biohazardous. Biohazardous waste bags must display the biohazard symbol on both sides. Sharps containers must display the biohazard symbol on all sides and the top; alternatively, red-colored containers with at least a single biohazard label can also be used.

All biohazardous waste that is stored for later on-site treatment or pick up for off-site treatment must be labeled with the date that the waste went to storage.

Transport of Biohazardous Waste

Transport of biohazardous waste consists primarily of sharps contained in sealed sharps containers that are transported by EH&S hazardous waste technicians from accumulation points on campus (mainly laboratories) to the ARF Annex 2 facility for staging until pick by the waste contractor. Additionally, EH&S transports sharps from off-campus locations at the Main Station Farm and the Nelson Building. The likelihood of personnel being contaminated by sharps is expected to be low. Further reducing the risk is the standard procedure of autoclaving filled sharps containers prior to pick up by EH&S (however, autoclaving prior to transport is not always possible).

In the Applied Research Facility, biohazardous waste generated in multiple laboratories in the building is accumulated and stored in room 012. EH&S hazardous waste technicians transport this waste at least once per week to the Howard Medical Sciences Building for autoclaving. Additionally, there may be other occasional situations where solid biohazardous waste contained in autoclavable biohazard bags is transported from the point of generation to another campus building for autoclaving. This transport would

generally not involve transport on public roads. Although this waste is treated as biohazardous with regard to treatment before disposal, it generally will not be infectious since work involving known human pathogens is usually conducted in buildings where autoclaves are available.

Transport by EH&S

As described above, EH&S transports biohazardous waste from campus work locations and off-campus locations to the ARF Annex 2 facility located on the main campus for staging prior to pickup by a biohazardous waste contractor. In these cases, generation and transport of biohazardous waste meets the criteria of the limited quantity transporter exemption. This exemption limits generation of biohazardous waste at a single work location to less than 20 pounds per week and transport at any one time to less than 20 pounds. EH&S also transports solid biohazardous waste generated in laboratories located in the Applied Research Facility to the Howard Medical Sciences Building where it is autoclaved. Some laboratories in the Applied Research Facility produce small quantities of biohazardous waste and use autoclaves in the building for sterilization.

Transport Document

Transport of biohazardous waste by EH&S from campus locations or off-campus locations to the ARF Annex 2 facility requires completion of a modified transport document that includes the following information:

- a. Name of the person transporting the biohazardous waste;
- b. Total number of containers in which the waste is transported;
- c. Type of biohazardous waste;
- d. Date of transport from the site of generation to the ARF Annex 2 facility.

Transport of biohazardous waste from the ARF Annex 2 facility by a biohazardous waste contractor for treatment at their facility requires a more extensive transport document. In this case it is the responsibility of the contractor to complete the transport document and provide copies and signed originals to EH&S as described in the Records Maintenance section of this document.

Disinfection of Transport Vehicles

EH&S trucks are used to transport sharps from various accumulation points on the UNR main campus to the ARF Annex 2 building for staging and to transport solid biohazardous waste from the ARF to the Howard Medical Sciences Building for autoclaving. Sharps are also transported by EH&S from UNR operations location off-campus but in the Reno/Sparks area. Sharps are placed in bus tubs as secondary containment during transport. Since the sharps containers do not contain liquid and are sealed closed, it is very unlikely that the secondary container or the transport vehicle will be contaminated by the biohazardous waste. If contents are released from the sharps containers, the sharps will be collected using forceps or tongs and placed back in a sharps

container. The affected bus tub will be disinfected using a bleach solution (domestic bleach diluted between 1/10 and 1/100). Personnel performing the cleanup will wear a lab coat, disposable nitrile gloves, and safety eyewear.

Decontamination of Personnel

The affected area of personnel exposed to biohazardous waste will be decontaminated using soap and water. After decontamination, the affected personnel will be transported to a medical facility for evaluation by a physician.

The highest risk of personnel contamination is from liquid biohazardous waste. Liquid biohazardous waste accumulation is limited to laboratories and clinical facilities where handwashing sinks, and emergency eyewashes and showers are readily available for use in decontamination.

Solid biohazardous waste and sharps are accumulated in laboratories, clinical facilities, and athletics where handwashing sinks are available. The likelihood of personnel being contaminated by solid biohazardous or sharps is expected to be low. Generally, sharps are autoclaved before being transported to the ARF Annex 2 Building for staging, which makes the likelihood of personnel contamination very unlikely.

Biohazardous Waste Management Contingency Plan

Spills or Releases

Spills or releases of infectious materials (including biohazardous wastes) must be decontaminated and cleaned up as soon as possible. Procedures for responding to a spill or release are contained in the UNR Biosafety Manual and Bloodborne Pathogens Exposure Control Plan. The Biosafety Manual and Exposure Control Plan are available on the EH&S web site at www.ehs.unr.edu, then choose the appropriate document from the drop-down menu under the "Safety Manuals" tab at the middle of the page. Additionally, EH&S maintains a 24 hour emergency phone number (327-5040) and can respond to biohazardous waste emergencies where level C personal protective equipment is adequate for responders. Incidents that require level A or B personal protective equipment will be handled by the Regional Hazardous Materials Team or a biohazardous waste contractor. Building emergency evacuation drills are conducted regularly and local fire department and hazardous materials team members often participate. These drills provide an opportunity to discuss emergency response issues and allow the responders to become familiar with UNR buildings and hazardous materials locations.

All spills or releases of biohazardous waste (other than minor incidents), personnel contamination incidents, significant facility contamination, and releases to the environment must be reported to EH&S as soon as possible (via the 24 hour emergency number at 327-5040). Any suspected release of biohazardous waste to the environment or confirmed infection of personnel that is believed to have resulted from UNR biohazardous waste operations will be reported to the Washoe County District Health Department within 24 hours of the release or confirmation.

Emergency or Natural Disaster that Disrupts Biohazardous Waste Treatment Service

Since UNR only treats biohazardous waste that it produces, the quantity of waste awaiting treatment at any time is relatively small. In the event of an emergency situation or natural disaster that prevents treatment of biohazardous waste, generation of biohazardous waste will be stopped and existing waste will be stored in proper containers at the point of generation or at existing storage locations. The possible exception to this would be continued production of biomedical waste by campus clinical facilities during an emergency or natural disaster situation that interrupts service by the local biohazardous waste contractor. In this situation, biohazardous waste from these facilities will be transported to another campus building for autoclaving if available and appropriate under the circumstances. If operable, campus autoclaves can also be used to sterilize biohazardous waste. Alternatively, the biohazardous waste will be transported to another campus building for storage until the local biohazardous waste contractor is able to resume service. There are many possible storage locations that can be utilized and the actual location used will be determined at that time according to current circumstances.

Equipment Malfunction

On-site equipment used to treat biohazardous waste is limited to autoclaves. If an autoclave becomes inoperable it is repaired as soon as possible by a trained service representative. Each Responsible Person listed in Appendix I is responsible for ensuring that repair records are maintained in accordance with this document. There are several autoclaves on campus that are used to treat biohazardous waste, so an alternate autoclave will be used while the inoperable autoclave is being repaired. If needed, arrangements can also be made with a local biohazardous waste contractor to treat and dispose of the waste.

Exposure Control Plan

Control of exposure to biohazardous wastes is covered by the UNR Biosafety Manual and the Bloodborne Pathogens Exposure Control Plan. These documents provide guidance on personal protective equipment to be used when handling infectious agents and biohazardous waste. Generally, personnel handling biohazardous waste must wear a minimum of a lab coat, disposable gloves, and safety eyewear. Personnel who are exposed to human blood or body fluids, tissues, or cells are included in the UNR Bloodborne Pathogens Program and receive annual bloodborne pathogens training and are offered the hepatitis B vaccination.

Training of Personnel

EHS provides biosafety training that includes handling and disposal of biohazardous waste to laboratory personnel who work with biological agents. Personnel that utilize autoclaves are provided specific training on the safe and proper use (in accordance with manufacturer's instructions) of this equipment. Personnel who conduct efficacy testing of autoclaves are also trained on internal standard operating procedures and spore test manufacturer's instructions. EH&S also provides bloodborne pathogens training that includes handling and disposal of biohazardous waste to personnel who are exposed to human blood, body fluids, tissues, or cells.

Applicable personnel are identified by supervisors and during workplace safety assessments conducted by EH&S. The availability of these training courses is communicated to the campus community which also allows applicable personnel to self-identify. Records of these training sessions, including personnel who attended training, are maintained by EH&S.

Autoclaves Used to Treat Biohazardous Waste

See Appendix I for a list of autoclaves used to treat biohazardous waste. Ben Owens, the UNR Biosafety Officer, should be notified if autoclaves used to treat biohazardous waste are added or deleted. Changes in the Responsible Person should also be communicated. EH&S will verify the information provided in Appendix I at least annually.

Visual Indicators

A visual indicator that provides evidence that adequate autoclave temperature was achieved must be included with each load of biohazardous waste that is autoclaved. Such indicators include heat sensitive tape or strips, or biohazardous waste bags that include a visual indicator integrated into the bag. If the visual indicator fails then biohazardous waste is not considered to be sterilized and must be re-autoclaved. If an autoclave fails a visual indicator test the autoclave cycle conditions (e.g., time and pressure) should be verified and corrected as needed. If an autoclave has two visual indicator failures in a row, or records indicate an increased failure rate for that specific autoclave, the autoclave should be inspected by a trained technician.

Efficacy Testing

Autoclaves used to treat biohazardous waste are tested for sterilization efficacy at least every three months using commercially available *Bacillus stearothermophilus* spore ampoules which contain a suspension of viable spores and are designed for this purpose. The spore ampoules will be placed inside a representative biohazardous waste load or a non-biohazardous, surrogate waste load. After the autoclave cycle is completed the spore ampoule is retrieved and incubated with a control ampoule at the recommended growth temperature (per the spore ampoule manufacturer's directions). The ampoules contain a pH indicator which changes color if growth occurs, allowing easy visual detection of growth. Lack of growth indicates that the autoclave conditions were sufficient to inactivate the heat-resistant spores, and thus provides good assurance that the autoclave conditions are sufficient to kill other more heat sensitive microbial agents.

If an autoclave fails an efficacy test, the autoclave cycle conditions should be verified and corrected as needed, and a second efficacy test should be repeated as soon as possible. Any waste that was autoclaved during the failed test is not considered to be sterilized and must be re-autoclaved. The specific autoclave that failed the test cannot be used to treat biohazardous waste until efficacy testing demonstrates adequate autoclave conditions are met. If an autoclave fails two efficacy tests in a row, or test records show an increased failure rate for that specific autoclave, the autoclave should be inspected by a trained technician.

In addition to quarterly efficacy testing requirements, the performance of autoclaves used to treat biohazardous waste must be verified through efficacy testing at the following times:

- a. Prior to initial use to treat biohazardous waste (whether unit is new, reconditioned, or pre-existing)
- b. Upon relocation of pre-existing, previously tested autoclaves
- c. After maintenance, repair, or calibration that has potential to negatively affect autoclave performance

Each Responsible Person listed in Appendix I is responsible for ensuring that efficacy testing of autoclaves used to treat biohazardous waste is conducted as specified in this document. The PI or responsible person can delegate the task of conducting the efficacy testing to a qualified person.

Records Maintenance

Off-Site Biohazardous Waste Treatment

A transport document is required that records both the movement of biohazardous waste from the generator to a treatment facility and the treatment to render it non-biohazardous. The waste transporter is responsible for generating this document and must provide the generator with a copy of the transfer document upon initial pickup. Within 30 calendar days after treatment of the waste, the treatment facility must return the original transfer document to the generator with authorized signature indicating that the waste has been treated to render it non-biohazardous. Both the copy of the transport document provided by the transporter upon initial pickup and the original document returned by the waste treatment facility after treatment must be maintained for a minimum of one year.

Each UNR administrative unit that transfers biohazardous waste directly to a transporter for off-site treatment without intermediate possession and storage by EH&S is responsible for maintaining transport documents for all waste transferred and treated in this manner.

EH&S is responsible for maintaining transport documents for all biohazardous waste for which it coordinates treatment and disposal. Generally, this will apply only to sharps picked up by EH&S from UNR workplaces and stored at the by ARF Annex facility prior to transfer to the biohazardous waste contractor.

Autoclave Records

Each Responsible Person listed in Appendix I is responsible for ensuring that autoclave records are maintained as specified in this document; however, the task of maintaining the records can be delegated to a qualified person.

The following records must be maintained for each autoclave used to treat biohazardous waste for a minimum of three years:

- a. Each autoclave cycle used to treat biohazardous waste, to include the following:
 - i. date and time
 - ii. autoclave temperature and pressure
 - iii. general description of waste load, including waste containers
 - iv. quantity of biohazardous waste
 - v. autoclave run time
 - vi. results of visual indicators (e.g., heat sensitive tape) used to verify adequate autoclave conditions
- b. All autoclave maintenance, calibration, and repair
- c. All autoclave efficacy tests and results

Contact Information Regarding UNR Biohazardous Waste

General Biohazardous Waste Issues:

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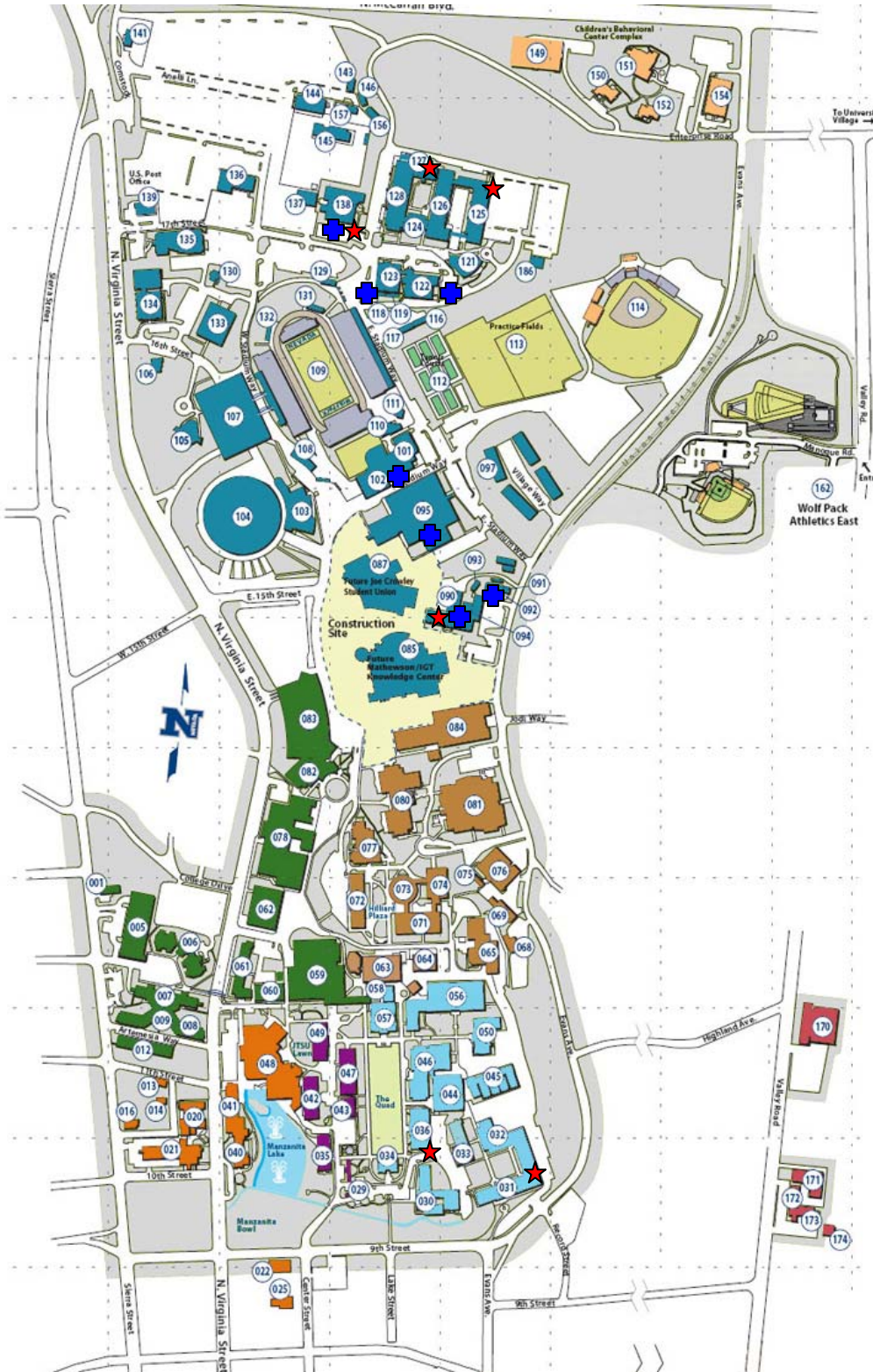
Facility Map of Biohazardous Waste Handling and Storage Areas

See Appendix II for a map that shows the locations of autoclaves used to treat biohazardous waste, and locations where biohazardous waste is stored prior to pick up by a biohazardous waste contractor (campus locations only).

Appendix I
Autoclaves Used to Treat Biohazardous Waste

1. Nellor Biomedical Sciences Building, Room 202
Laboratory Animal Medicine
Responsible Person – Roger Van Andel
Steris E3043
Steris E3048
2. Howard Medical Sciences Building, Room 102
For general medical school use
Responsible Person – Ann Percival
2 X Steris 250
3. Nevada State Public Health Laboratory, Room 128
Responsible Person – Louis D. Brown
2 X Steris 250
4. Applied Research Facility
Responsible Person – Chris Pritsos
Room 227 – Hirayama
Room 228 – Hirayama
5. Mackay Science Building, Room 308
Biology Dept. use for microbiology teaching lab
Responsible Person – Celeste Johnson
Amsco
6. Fleischmann Agriculture Building, Room 313
Responsible Person – Steve St. Jeor
Steris SV-120
7. Fleischmann Agriculture Building, Room 313
For general use
Responsible Person – Lou Christensen
Steris 3021 gravity
Steris SV-120

Appendix II Campus Map of Biohazardous Waste Autoclaves and Storage Areas



Autoclave Locations ★

1. Nellor Biomedical Sciences (#127)
2. Howard Medical Sciences (#125)
3. NV State Public Health Lab (#138)
4. Applied Research Facility (#090)
5. Mackay Science (#036)
6. Fleischmann Agriculture (#031)

Storage Locations (prior to pickup) ■

1. Student Health Center (#122)
2. Family Medicine Center (#123)
3. Cashell Field House (#102)
4. Lombardi Building (#095)
5. NV State Public Health Lab (#138)
6. Applied Research Facility (#090)
7. Applied Research Facility Annex 2 (#092)