Office of Safety
University of North Dakota
3851, Campus Rd Stop 9031
Grand Forks, ND 58202-9031
Ph. No. 701-777-3341
Fax: 701-777-4132

BSL-1 FACILITY INSPECTION FORM

DATE OF SURVEY:	**CONDUCTED BY:** _____	**BUILDING:** _____
ROOM NUMBER:	**DEPARTMENT:** _____	**PRINCIPAL INVESTIGATOR:**
E-MAIL ADDRESS:		
RESPONSIBLE PERSON (OTHER THEN PI):		
PHONE NUMBER:	**E-MAIL ADDRESS:**	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
	SECTION A: GENERAL LAB SAFETY					
1.0 SIGNAGE						
1.1	The laboratory door(s) are posted with the current Office of Safety issued signage and display up-to-date emergency contact information.	☐	☐	☐	☐	
2.0 DOCUMENTATION AND TRAINING						
2.1	All personnel know how to access the Office of Safety website.	☐	☐	☐	☐	
2.2	All personnel know how to access UND's ***Bloodborne Pathogens Exposure Control Plan*** on the Office of Safety website.	☐	☐	☐	☐	
2.3	All personnel know how to access UND's ***Institutional Biosafety Manual*** on the Office of Safety website.	☐	☐	☐	☐	
2.4	All personnel know how to access ***University's Chemical Hygiene Plan*** on the Office of Safety website.	☐	☐	☐	☐	
2.5	An up-to-date ***Chemical Inventory*** is available inside each laboratory.	☐	☐	☐	☐	
2.6	Facility specific emergency plans are available and up-to-date.	☐	☐	☐	☐	
2.7	All personnel have taken the ***Laboratory Safety Training Course*** within the past year and documentation is available.	☐	☐	☐	☐	
2.8	All personnel have attended ***Radiation Safety Training*** within the past 3 years **(Radiation labs only).**	☐	☐	☐	☐	
2.9	All personnel who work with human blood, bodily fluids, tissues, cell lines, etc. have completed the ***Bloodborne Pathogens Training*** within the last year and documentation is available **(This training is independent of Laboratory Safety Training).**	☐	☐	☐	☐	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
3.0 SHIPPING TRAINING						
3.1	If your lab ships biological/infectious agents or dry ice, has an individual from the lab taken ***Compliance Training for Shipping Infectious and Biological Substances*** with the past 2 years?	☐	☐	☐	☐	
3.2	If yes, please list the name of the trained person and the last training date below: **Name: _____ Date: _____**	☐	☐	☐	☐	
4.0 CHEMICAL STORAGE						
4.1	All chemicals are labeled with the full chemical name. (***Example: Ethyl alcohol - not ETOH).***	☐	☐	☐	☐	
4.2	Chemical containers are in good condition (i.e. completely intact and clean on the outside).	☐	☐	☐	☐	
4.3	Legacy / obsolete chemicals (inherited, unused for 10+ years, obvious container deterioration) are collected and given to Office of Safety for disposal.	☐	☐	☐	☐	
4.4	Chemicals are stored by compatibility ***(i.e. flammables and oxidizers are separated, acids and bases are separated, etc.).***	☐	☐	☐	☐	
4.5	Mineral acids are stored separately from organic acids.	☐	☐	☐	☐	
4.6	Perchloric acid is stored separately from all other materials.	☐	☐	☐	☐	
4.7	Chemicals are stored in appropriate locations ***(i.e. flammables are in a flammables cabinet, corrosives are in a corrosives cabinet, etc.).***	☐	☐	☐	☐	
4.8	Corrosives are stored in a secondary container (Example: polypropylene bin).	☐	☐	☐	☐	
4.9	Shelves, cabinets, and counter tops are stable and not overloaded, and containers are placed on shelves in a safe manner.	☐	☐	☐	☐	
4.10	Chemicals are not stored on the floor.	☐	☐	☐	☐	
4.11	Chemicals are stored in such a way as to prevent release to the environment (stored away from sink drains; containers are tightly capped).	☐	☐	☐	☐	
5.0 FLAMMABLE LIQUIDS STORAGE						
5.1	Flammables are stored in an approved flammable liquids cabinet. (Contact Office of Safety with questions.)	☐	☐	☐	☐	
5.2	Volatile liquids are stored in an explosion-proof refrigerator when required.	☐	☐	☐	☐	
5.3	Aerosol cans are kept away from heat and ignition sources.	☐	☐	☐	☐	
6.0 SPECIAL CHEMICAL HAZARDS						
6.1	Acetyl cholinesterase inhibitors are stored securely and in compatibility groups.	☐	☐	☐	☐	
6.2	Pyrophoric compounds are stored by compatibility groups.	☐	☐	☐	☐	
6.3	Shock sensitive compounds are stored by compatibility groups. For those compounds that require underwater storage (reactive when dry), periodic inspections of the material are conducted.	☐	☐	☐	☐	
6.4	Unstable materials, cryogens, and water-reactive materials are handled properly.	☐	☐	☐	☐	
6.5	Carcinogens, teratogens, mutagens are stored securely and in compatibility groups.	☐	☐	☐	☐	
6.6	Written procedures are in place for the use of acutely hazardous chemicals ***(i.e. carcinogens, reproductive hazards, highly toxic substances, etc.).***	☐	☐	☐	☐	
6.7	Laboratory personnel know the peroxide-forming chemicals used in the lab.	☐	☐	☐	☐	
6.8	Containers of peroxide-forming chemicals are disposed of properly through Office of Safety.	☐	☐	☐	☐	
6.9	Peroxide-forming chemicals are labeled with the date received and the expiration date.	☐	☐	☐	☐	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
7.0 MERCURY						
7.1	Alternatives to mercury are used, if possible.	☐	☐	☐	☐	
7.2	All mercury thermometers have been replaced with mercury-free thermometers.	☐	☐	☐	☐	
7.3	Mercury containing devices still in use are intact and are not leaking. ***Mercury leaks or spills are reported to Office of Safety immediately.***	☐	☐	☐	☐	
7.4	Unused mercury containing devices (thermometers, thermostats, etc.) are disposed of through Office of Safety.	☐	☐	☐	☐	
8.0 DEA CONTROLLED SUBSTANCES						
8.1	Federal ***DEA License*** is available.	☐	☐	☐	☐	
8.2	State of North Dakota Board of Pharmacy License is available.	☐	☐	☐	☐	
8.3	DEA-regulated items are secured in a locked container.	☐	☐	☐	☐	
8.4	Expired drugs are disposed of properly.	☐	☐	☐	☐	
8.5	Lab has proper record keeping of stock, usage, and disposal.	☐	☐	☐	☐	
9.0 COMPRESSED GASES						
9.1	Cylinders secured.	☐	☐	☐	☐	
9.2	Away from heat.	☐	☐	☐	☐	
9.3	Flammable and oxidizing gases separated.	☐	☐	☐	☐	
9.4	Away from exits.	☐	☐	☐	☐	
10.0 FUME HOODS						
10.1	Inspected within last year.	☐	☐	☐	☐	
10.2	Undamaged.	☐	☐	☐	☐	
10.3	Used Correctly.	☐	☐	☐	☐	
11.0 BIOLOGICAL SAFETY CABINETS						
11.1	All active BSCs have been certified within the last 12 months by a vendor approved by UND.	☐	☐	☐	☐	
11.2	The certification label is attached and initialed by a vendor approved by UND.	☐	☐	☐	☐	
11.3	Intake and rear grilles are clear of obstructions.	☐	☐	☐	☐	
11.4	Bunsen burners and/or open flames are not used in biological safety cabinets. ***(Open flames are not permitted inside BSCs; consider an alternative, such as an electrical Bacti-Cinerator).***	☐	☐	☐	☐	
11.5	Work surfaces are clean and free of visible biological residue.	☐	☐	☐	☐	
11.6	The sash alarm is not muted.	☐	☐	☐	☐	
12.0 ELECTRICAL						
12.1	Extension cord use is temporary.	☐	☐	☐	☐	
12.2	Proper grounding is used.	☐	☐	☐	☐	
12.3	Cord and equipment in good condition.	☐	☐	☐	☐	
12.4	No outlet overloading.	☐	☐	☐	☐	
12.5	Outlets near water GFCI protected.	☐	☐	☐	☐	
12.6	Electrical Panels Accessible.	☐	☐	☐	☐	
12.7	Shock hazards have proper signage.	☐	☐	☐	☐	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
13.0 EMERGENCY EQUIPMENT						
13.1	**FIRE EXTINGUISHER**					
	Correct type Fire Extinguisher present.	☐	☐	☐	☐	
	Fire Extinguisher easily accessible.	☐	☐	☐	☐	
	Fire Extinguisher tagged within the last year by Office of Safety.	☐	☐	☐	☐	
13.2	**SAFETY SHOWERS**					
	Safety showers are unobstructed.	☐	☐	☐	☐	
	Safety showers are tested monthly.	☐	☐	☐	☐	
	Safety showers are functional and installed properly.	☐	☐	☐	☐	
13.3	**EYEWASHES**					
	Eyewashes are unobstructed.	☐	☐	☐	☐	
	Eyewashes are tested monthly.	☐	☐	☐	☐	
	Eyewashes are functional and installed properly.	☐	☐	☐	☐	
13.4	**SPILL KITS AND FIRST AID**					
	Spill kits and first aid are stocked appropriately.	☐	☐	☐	☐	
	Spill kits and first aid are readily accessible.	☐	☐	☐	☐	
	Disinfectant available.	☐	☐	☐	☐	
	Broom, dustpan, forceps available.	☐	☐	☐	☐	
	Calcium gluconate available for HF.	☐	☐	☐	☐	
14.0 CHEMICAL WASTE						
14.1	Office of Safety picks up all chemical waste from the facility.	☐	☐	☐	☐	
14.2	Chemicals are not put down the drain, in the regular trash, or in biomedical waste.	☐	☐	☐	☐	
14.3	All chemical / chemical waste containers are closed except when in use.	☐	☐	☐	☐	
14.4	Chemical wastes are compatible with their containers and are stored by compatibility ***(i.e. acid waste is not stored with alkaline waste).***	☐	☐	☐	☐	
14.5	Office of Safety picks up all empty P-listed chemical containers from the facility.	☐	☐	☐	☐	
14.6	Office of Safety picks up expired pharmaceutical wastes (excluding DEA controlled substances) from the facility.	☐	☐	☐	☐	
15.0 BIOLOGICAL WASTE						
15.1	Biomedical waste containers are labeled with the Biohazard symbol and the word “Biohazard”.	☐	☐	☐	☐	
15.2	An orange / red Biohazard bag is used to dispose of biohazardous waste.	☐	☐	☐	☐	
15.3	Biohazard waste containers are closed except when adding waste.	☐	☐	☐	☐	
15.4	Biohazards are not put down the drain or in regular trash.	☐	☐	☐	☐	
15.5	Biohazard waste is not mixed with chemical waste.	☐	☐	☐	☐	
15.6	Facility-specific SOPs for the treatment and removal of biohazard waste from the facility are available and adhered to.	☐	☐	☐	☐	
16.0 SHARPS HANDLING AND WASTE						
16.1	Sharps are disposed of in a sharps disposal container and the containers are no greater than ¾ full.	☐	☐	☐	☐	
16.2	Sharps containers are tightly lidded to prevent the contents from spilling.	☐	☐	☐	☐	
16.3	Office of Safety picks up sharps waste for disposal.	☐	☐	☐	☐	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
17.0 RADIOACTIVE WASTE						
17.1	Lab has current authorization for ordering, working with, and/or storing radioactive materials.	☐	☐	☐	☐	
17.2	If lab has received an annual letter indicating inactive status, the lab does not have any radioactive materials (RAM) or RAM waste in the lab.	☐	☐	☐	☐	
17.3	Radioisotopes in use are listed on authorization permit.	☐	☐	☐	☐	
17.4	Personnel working with radioactive materials are identified on PI's authorization permit.	☐	☐	☐	☐	
17.5	All personnel listed on the radiation safety permit are up-to-date on their Office of Safety required ***Radiation Safety Training.***	☐	☐	☐	☐	
17.6	Area Geiger meter surveys/wipe tests are performed during the work weeks that radioactive materials are used.	☐	☐	☐	☐	
17.7	Documentation of wipe tests include a list or map of areas surveyed, model and manufacturer of counter used, date of test, and the initials of the individual who performed the test. The results are either recorded in units of dpm or in cpm with counter efficiency and include a background reading.	☐	☐	☐	☐	
17.8	No unauthorized removal of radioactive material from a facility has occurred. All transport of radioactive materials between facilities is conducted by Office of Safety.	☐	☐	☐	☐	
17.9	***"Radioactive Material Laboratory"*** signs are posted at the lab entrance and on the lab bench/areas/equipment where radioactive material is used.	☐	☐	☐	☐	
17.10	Use and storage of radioactive materials takes place in the authorized area.	☐	☐	☐	☐	
17.11	Shielding is present and appropriate for type of radiation. Shielding reduces dose rate to 2 mR/hr or less at 30 cm from source or surface.	☐	☐	☐	☐	
17.12	All radioactive waste is stored in Office of Safety provided radioactive waste containers.	☐	☐	☐	☐	
17.13	Radioactive material is secured against unauthorized access or removal. Methods include locking unattended laboratories, locking refrigerators or freezers in unrestricted areas or for shared refrigerators or freezers, securing in a lock box attached to the refrigerator or freezer.	☐	☐	☐	☐	
17.14	Radioactive waste is segregated by isotope and waste type (Dry, Liquid, or Liquid Scintillation Vial).	☐	☐	☐	☐	
17.15	Radioactive waste containers are labeled with a provided Office of Safety Radioactive Waste Label complete with PI's name, and isotope.	☐	☐	☐	☐	
17.16	Radioactive waste is not disposed of via sewer without authorization and documentation. Sewer disposal is not in excess of authorized limits.	☐	☐	☐	☐	
17.17	Personnel wear badges properly when handling radioactive material.	☐	☐	☐	☐	
17.18	Personnel radioactive exposure records are stored in the lab's Radiation Safety Binder.	☐	☐	☐	☐	
17.19	Personal dosimetry badges and control badges are stored away from radioactive materials.	☐	☐	☐	☐	
17.20	Labels on shipping boxes used for receiving radioactive materials are defaced prior to disposal through housekeeping.	☐	☐	☐	☐	
18.0 AUTOCLAVE USE						
18.1	A facility specific SOP for autoclave validation is available and adhered to.	☐	☐	☐	☐	
18.2	Documentation of autoclave validation is maintained and made available upon request.	☐	☐	☐	☐	
18.3	Autoclaves are validated at least monthly.	☐	☐	☐	☐	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
SECTION B: BIOSAFETY (These questions are based on the Biosafety level 1 section of Biosafety in Microbiological and Biomedical Laboratories, 5th Edition.						
1.1	**Biological Agents used in this laboratory for research.**	☐	☐	☐	☐	
1.2	***Access to the laboratory is limited or restricted*** when experiments involving infectious organisms are in progress. Enforcement is the responsibility of the PI/Lab Supervisor.	☐	☐	☐	☐	
1.3	**Persons must wash their hands:** **a) After working with potentially hazardous materials including:** i. infectious organism's ii. Organisms with r/syn DNA/RNA iii. Animals. **b) Before leaving the lab.**	☐	☐	☐	☐	
1.4	Eating, drinking, smoking, handling contact lenses, applying cosmetics, and storing food for human consumption must not be permitted in laboratory areas. Food must be stored outside the laboratory area in cabinets or refrigerators designated and used for this purpose.	☐	☐	☐	☐	
1.5	Mouth pipetting is prohibited; mechanical pipetting devices must be used.	☐	☐	☐	☐	
1.6	Policies for the safe handling of sharps, such as needles, scalpels, pipettes, and broken glassware must be developed and implemented. Whenever practical, laboratory supervisors should adopt improved engineering and work practice controls that reduce risk of sharps injuries. Precautions, including those listed below, must always be taken with sharp items. These include: a. Careful management of needles and other sharps are of primary importance. Needles must not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal. b. Used disposable needles and syringes must be carefully placed in conveniently located puncture-resistant containers used for sharps disposal. c. Non-disposable sharps must be placed in a hard walled container for transport to a processing area for decontamination, preferably by autoclaving. d. Broken glassware must not be handled directly. Instead, it must be removed using a brush and dustpan, tongs, or forceps. Plastic ware should be substituted for glassware whenever possible.	☐	☐	☐	☐	
1.7	Decontaminate work surfaces after completion of work and after any spill or splash of potentially infectious material with appropriate disinfectant.	☐	☐	☐	☐	
1.8	Decontaminate all cultures, stocks, and other potentially infectious materials before disposal using an effective method. Depending on where the decontamination will be performed, the following methods should be used prior to transport: a. Materials to be decontaminated outside of the immediate laboratory must be placed in a durable, leak proof container and secured for transport. b. Materials to be removed from the facility for decontamination must be packed in accordance with applicable local, state, and federal regulations.	☐	☐	☐	☐	
1.9	A sign incorporating the ***UNIVERSAL BIOHAZARD SYMBOL*** must be posted at the entrance to the laboratory when infectious agents are present. Posted information must include: the laboratory's biosafety level, supervisor's name (or other responsible personnel), telephone number, and required procedures for entering and exiting the laboratory. Special precautions for organisms containing r/syn DNA/RNA are also included on door signs.	☐	☐	☐	☐	
1.10	An effective integrated pest (insect and rodent) management program is required.	☐	☐	☐	☐	

ITEM #	ITEM	YES	NO	CTI	N/A	COMMENTS CTI=CORRECTED AT TIME OF INSPECTION
1.11	The laboratory supervisor must ensure that laboratory personnel receive appropriate training regarding their duties, the necessary precautions to prevent exposures, and exposure evaluation procedures. Personnel must receive annual updates or additional training when procedural or policy changes occur. Personal health status may impact an individual's susceptibility to infection, ability to receive immunizations or prophylactic interventions. Therefore, all laboratory personnel and particularly women of childbearing age should be provided with information regarding immune competence and conditions that may predispose them to infection. Individuals having these conditions should be encouraged to self-identify to the institution's healthcare provider for appropriate counseling and guidance.	☐	☐	☐	☐	
1.12	Special containment devices or equipment, such as BSCs, are not generally required.	☐	☐	☐	☐	
1.13	Protective laboratory coats, gowns, or uniforms are recommended to prevent contamination of personal clothing.	☐	☐	☐	☐	
1.14	Wear protective eyewear when conducting procedures that have the potential to create splashes of microorganisms or other hazardous materials. Persons who wear contact lenses in laboratories should also wear eye protection.	☐	☐	☐	☐	
1.15	Gloves must be worn to protect hands from exposure to hazardous materials. Glove selection should be based on an appropriate risk assessment. Alternatives to latex gloves should be available. Wash hands prior to leaving the laboratory. In addition, BSL-1 workers should: a. Change gloves when contaminated, glove integrity is compromised, or when otherwise necessary. b. Remove gloves and wash hands when work with hazardous materials has been completed and before leaving the laboratory. c. Do not wash or reuse disposable gloves. Dispose of used gloves with other contaminated laboratory waste. Hand washing protocols must be rigorously followed.	☐	☐	☐	☐	
1.16	Laboratories should have doors for access control.	☐	☐	☐	☐	
1.17	Laboratories must have a sink for hand washing.	☐	☐	☐	☐	
1.18	The laboratory should be designed so that it can be easily cleaned. Carpets and rugs in laboratories are not appropriate	☐	☐	☐	☐	
1.19	Laboratory furniture must be capable of supporting anticipated loads and uses. Spaces between benches, cabinets, and equipment should be accessible for cleaning. a. Bench tops must be impervious to water and resistant to heat, organic solvents, acids, alkalis, and other chemicals. b. Chairs used in laboratory work must be covered with a non-porous	☐	☐	☐	☐	
1.20	Laboratories windows that open to the exterior should be fitted with screens.	☐	☐	☐	☐	
1.21	A ***laboratory-specific biosafety manual*** must be prepared and adopted as policy. The biosafety manual must be available and accessible.	☐	☐	☐	☐	
1.22	Laboratory doors should be self-closing and have locks in accordance with the institutional policies.	☐	☐	☐	☐	
1.23	An eyewash station must be readily available.	☐	☐	☐	☐	