



Laboratory Inspection Checklist

Department/Unit: _____ Date of Inspection: _____

Principal Investigator: _____ Permit/Certificate Number(s): _____

Inspector Name: _____ Room Number(s): _____

Inspector Email: _____ Lab Designation(s): _____

Inspection Section A: General Laboratory Safety

Inspection Items	Ratings	Verification/Comments
Security		
1. Is access to the laboratory restricted to authorized personnel/ authorized visitors only?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
2. Is the lab/containment zone separate from public areas by a lockable door?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> physical key <input type="checkbox"/> card <input type="checkbox"/> other _____
3. Are RAM/BIO hazards left unattended?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
4. Are RAM/BIO/CHEM hazards inaccessible to unauthorized individuals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> locked refrigerator <input type="checkbox"/> locked storage box/cabinet <input type="checkbox"/> other _____
5. If barrier windows are openable, is there effective pest control/security in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> screens <input type="checkbox"/> privacy film <input type="checkbox"/> other _____
6. Are lab doors kept closed at all time?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Signage		
7. Is appropriate hazard warning signage posted at all points of entry to the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do signs contain the required information? <input type="checkbox"/> Correct symbols <input type="checkbox"/> Wording (e.g. "RAYONNEMENT-DANGER-RADIATION" for RAM labs) <input type="checkbox"/> BIO containment level/RAM laboratory classification <input type="checkbox"/> Required PPE listed

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		<input type="checkbox"/> Emergency contact information present and correct <input type="checkbox"/> Requirements for entry, if any, present
8. Are internal authorizations and authorized worker lists (RAM) posted within the lab and up to date?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Radioisotope user permit <input type="checkbox"/> Biosafety certificate
9. Is there frivolous posting/display of RAM/BIO signs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Emergency/Life Safety		
10. Are emergency eyewash/shower facilities available as per ANSI Z358.1?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Is appropriate signage available <input type="checkbox"/> Are weekly checks conducted and documented? <input type="checkbox"/> Is annual inspection current?
11. Are spill kits appropriate for the hazard(s) available in the lab? <input type="checkbox"/> Chemical <input type="checkbox"/> BIO <input type="checkbox"/> RAM <input type="checkbox"/> Other _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are spill kits adequately stocked (review contents)? <input type="checkbox"/> Are spill kits routinely checked/signed-off for contents? <input type="checkbox"/> Is a procedure available to instruct workers on how to use spill kits?
12. Are fire extinguishers available?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Certification date? _____
13. Is a first aid kit available?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> No expired items <input type="checkbox"/> Prominent signage posted
14. Is a means of two-way communication available?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Land-line phone <input type="checkbox"/> Cell phone <input type="checkbox"/> clear window in door <input type="checkbox"/> other _____
Personal Protective Equipment (PPE)/Lab Safety		
15. Is dedicated PPE available and worn while working with CHEM/RAM/BIO?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Lab coat <input type="checkbox"/> appropriate closed toe shoes <input type="checkbox"/> gloves <input type="checkbox"/> eye protection (if necessary) <input type="checkbox"/> Is PPE donned and doffed in a manner that minimizes contamination? <input type="checkbox"/> Is activity-specific PPE or an additional layer of PPE required/used?
a. Is space available for PPE storage (near the point(s) of entry)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Hooks <input type="checkbox"/> Lockers <input type="checkbox"/> Other _____
b. Is PPE worn outside of the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

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c. Is PPE decontaminated prior to laundering if an exposure occurs (what is the process)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
d. Are personal belongs/clothing stored away from PPE and hazard areas? Where?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Office separate from the lab <input type="checkbox"/> Dedicated office space within lab separate from work areas
Laboratory Safety Equipment		
16. Are chemical fume hoods available if required? (provide recent certification date)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Next certification date? _____ <input type="checkbox"/> Used for storage? <input type="checkbox"/> Sash height and flow failure indicators present / functioning?
Physical Laboratory		
17. Is the laboratory clean and free from unnecessary materials (i.e. tidy) or materials that may be difficult to decontaminate?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
18. Are surfaces/furniture non-absorbent and easily decontaminated/cleaned?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are surfaces that may come in contact with hazardous materials continuous with adjacent and overlapping materials? <input type="checkbox"/> furniture composed of (or with exposed) absorbent material <input type="checkbox"/> damaged surfaces exposing absorbent material <input type="checkbox"/> other _____
Laboratory Operation		
19. Have workers completed <u>core</u> safety training (are training records available/current)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> BIO <input type="checkbox"/> RAM <input type="checkbox"/> WHMIS/Lab Safety <input type="checkbox"/> Other _____
20. Are workers working with RAM/BIO/CHEM safely/securely and according to policies /procedures?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Is a Lab Safety Plan available? <input type="checkbox"/> Are written procedures available? <input type="checkbox"/> RSOP <input type="checkbox"/> BSOP
21. Are “clean” and “dirty” areas clearly identified and adequately separated and identified within the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Is PPE stored in “clean” areas?
22. Have there been any incidents since the last inspection? (check all that apply)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Spills <input type="checkbox"/> lost/stolen materials <input type="checkbox"/> device/instrument damage <input type="checkbox"/> unauthorized release/disposals

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		<input type="checkbox"/> access by unauthorized individuals <input type="checkbox"/> sabotage <input type="checkbox"/> personal exposure (LAI) <input type="checkbox"/> containment system failures <input type="checkbox"/> other _____
a. If so, were incidents reported via MIMS?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> >100 EQ RAM spill requires reporting <input type="checkbox"/> HPTA reporting <input type="checkbox"/> Are records kept for required period (e.g. CBS - 10 years)?
23. Is hand washing sink (with soap and towels) available in the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> No sink <input type="checkbox"/> No soap <input type="checkbox"/> No towels <input type="checkbox"/> Hand washing required after removing gloves and before exiting laboratory. <input type="checkbox"/> Hand washing required after working within fume hood/BSC?
24. Are open wounds covered with waterproof dressings/bandages?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> No bandages in first aid kit
25. Is exposed jewellery removed or covered prior to entering laboratory?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
26. Is there any evidence of food/drink within the laboratory or containment zone?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
27. Is long hair restrained during work?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
28. Is sharps use minimized when possible and are sharps disposed in CSA approved containers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> No sharps container available

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Inspection Section B: Chemical Safety

Inspection Items	Ratings	Comments
29. Have workers received lab/job-specific WHMIS training?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> No training records available
30. Are chemicals stored properly (i.e. in adequate cabinets)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are cabinets in good condition? <input type="checkbox"/> Are appropriate spill trays used for corrosive materials? <input type="checkbox"/> Does inventory include highly hazardous chemicals: <input type="checkbox"/> human reproductive toxins (teratogens) <input type="checkbox"/> sensitizers <input type="checkbox"/> acutely toxic chemicals <input type="checkbox"/> Other _____ If present are they <input type="checkbox"/> stored/handled appropriately? <input type="checkbox"/> Are Safe Work Procedure's (SWP) available?
31. Are chemicals segregated according to MUN's chemical compatibility chart?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are chemicals labelled with WHMIS compliant labels?
32. Are chemical inventories in EHS Assistant up to date?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Date of last inventory verification: _____ <input type="checkbox"/> Are safety data sheets (SDS) available and up to date?
33. Are compressed gas cylinders stored properly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Cylinders securely chained at 2/3 height <input type="checkbox"/> Caps on when not in use? <input type="checkbox"/> No storage of propane cylinders
34. Are chemicals (used, expired or unstable) disposed of using Memorial's hazardous waste procedure?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are appropriate waste containers available in the lab?
35. Are all chemicals in the lab labelled with a WHMIS-compliant label?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Product name <input type="checkbox"/> Safe handling procedures <input type="checkbox"/> Reference to SDS



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Inspection Section C: Biological Safety

Inspection Items	Ratings	Comments
36. Is an up to date biohazard inventory available (including items stored outside of the laboratory)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Is material stored outside CZ in labelled, leak-proof, impact resistant container with restricted access? How is access restricted? _____
37. Are BSC required and used for required procedures according to a local risk assessment (LRA) and biosafety certificate?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Annual BSC recertification date _____ <input type="checkbox"/> Are BSC located away from high traffic areas/HVAC vents, etc. to avoid disrupting the air curtain? <input type="checkbox"/> Is BSC functionality verified at acceptable frequency? How? _____
38. Are vacuum systems present/used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> (if present) are they equipped with a filter and/or disinfectant trap? <input type="checkbox"/> Is verification of filters performed at an acceptable frequency? How often? _____
39. Are the disinfectants used effective against the biohazardous materials in use?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	What type(s) and concentration(s) are used? _____ <input type="checkbox"/> Are working solutions labeled with the preparation date?
40. Are biohazards appropriately decontaminated prior to disposal?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Liquids are bleach treated prior to disposal. <input type="checkbox"/> Liquids are autoclaved prior to disposal. <input type="checkbox"/> Solids are autoclaved prior to disposal. <input type="checkbox"/> Waste is picked up for off-site disposal. <input type="checkbox"/> other _____
41. Is <u>non-sterilized</u> waste moved/transported outside of the laboratory?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> If yes, is BSOP-04 followed?
42. Are work surfaces (e.g., benches) decontaminated at an acceptable	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Before work <input type="checkbox"/> After work

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frequency? How often (e.g. before and after work)?		
43. Is contaminated PPE/clothing decontaminated prior to laundering	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Autoclaved <input type="checkbox"/> Chemical disinfection <input type="checkbox"/> other _____
44. Are autoclave monitoring/recording devices functioning and provide operational parameters?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are autoclave parameters <u>validated</u> at least annually? <input type="checkbox"/> <u>Verified</u> with autoclave tape/biological indicators (BI's)? <input type="checkbox"/> Are logs, including BI results, complete and up to date?
45. Have workers completed <u>lab-specific</u> training?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Does it include hazards associated with work, symptoms of illness and preventative measures? <input type="checkbox"/> Is emergency response refresher training given annually and documented? <input type="checkbox"/> Does training cover CZ design/operation and use/operation of lab equipment? <input type="checkbox"/> Is there a training syllabus describing content? <input type="checkbox"/> Is all training documented?
46. Have there been any HPTA-reportable events in the past year?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> increase the virulence or pathogenicity of a human pathogen. <input type="checkbox"/> increase the communicability of a human pathogen. <input type="checkbox"/> increase the resistance of a human pathogen to preventive or therapeutic treatments. <input type="checkbox"/> increase the toxicity of a toxin. <input type="checkbox"/> if yes, was BSO informed?

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Inspection Section D: Radiation Safety

Inspection Items	Ratings	Comments
47. Is a properly functioning contamination meter/Liquid Scintillation Counter (LSC) available?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Is an up to date wipe map available for all authorized location? <input type="checkbox"/> Is contamination monitoring completed within prescribed time frame (i.e. 7 days of initial RAM use)? <input type="checkbox"/> Are areas above "dirty" or "action" contamination limits cleaned and re-wiped and, if necessary, reported to RSO?
a. Do workers know contamination limits?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> "dirty" = 0.5 Bq/cm ² <input type="checkbox"/> MUN action = 30 Bq/cm ² (for Class C isotopes) <input type="checkbox"/> CNSC action = 300 Bq/cm ² (for Class C isotopes)
48. Are physical and electronic (EHSA) inventories (including use/disposal) identical and up to date?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Are use/disposal records available and up to date? <input type="checkbox"/> Are dose rates outside of storage areas, rooms or enclosures < 2.5 uSv/hr? (Use survey meter to check) <input type="checkbox"/> Inventory verification report provided.
49. Is disposal of RAM waste approved by RSO prior to disposal?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> If used for RSO-approved disposal, are sink drains labelled with radiation trefoil?
50. Are containers or devices with > 1 EQ of RAM labeled appropriately?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> trefoil <input type="checkbox"/> isotope name <input type="checkbox"/> activity <input type="checkbox"/> date of measurement <input type="checkbox"/> physical form
51. Are radioisotopes used on humans?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
52. Are dosimeters worn when required?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
53. Is a copy of the current CNSC license posted in the building/taken into the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Location of posting _____
54. Are required signs/posters posted <u>within</u> the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> CNSC containment safety poster (for "Basic" level labs)? <input type="checkbox"/> CNSC spill response poster? <input type="checkbox"/> CNSC package receipt poster? <input type="checkbox"/> CNSC dosimetry poster?



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55. Are packages received according to CNSC/MUN guidelines?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> TDG-7 is required (receipt of type A packages) TDG-7 expiry date: _____ <input type="checkbox"/> Package is checked for damage? Reported if damaged? <input type="checkbox"/> Wipe tested and dose surveyed? Reported if above limits? <input type="checkbox"/> Logged in to EHS Assistant? <input type="checkbox"/> Receipt documentation retained for at least 2 years?
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Corrective Action Listing

Non-Compliance	Corrective Action	Assigned to	Due Date

Date: _____

Inspector (print): _____ Inspector (signature): _____

Date: _____

PI (print): _____ PI (signature): _____