

LASER SAFETY INSPECTION (BNL) CHEMISTRY EXAMPLE

Chemistry Department Semiannual Laser Safety Inspection Protocol

1. Chemistry Department LSIs shall be carried out two times per calendar year. The first shall be performed in the month of January, the second in the month of July.
2. LSIs shall be performed by the Chemistry Department LSC or delegate as approved by the Chemistry Department Chair.
3. LSIs shall be made of all laser laboratories located in the Chemistry Department (Building 555). A laser laboratory shall be defined as any laboratory for which a BNL SOP has been authorized.
4. At least one owner/operator named in the SOP must be present during the inspection.
5. During December and June, reminders shall be sent to each owner/operator stating that LSIs will be scheduled and that laser safety door interlock system tests be performed and documented prior to the LSI.
6. The LSI shall consist of: (1) confirmation that all laser-specific documentation, including SOPs, laser registrations, interlock tests, and laser-specific training forms, are current, (2) inspection of the lab and (3) discussion of any changes made in documentation, operations, personnel, and equipment since the preceding LSI. A *Semiannual Laser Safety Inspection and Action Item Checklist* specifying all required inspection items shall be developed and maintained by the LSC.
7. During and immediately following the LSI, a *Semiannual Laser Safety Inspection and Action Item Checklist* shall be completed for each laser laboratory. The checklist shall document where the laboratory documentation, experimental configuration, or operations are found to be noncompliant, and shall indicate corrective actions. Completed checklists shall be kept on file by the LSC.
8. In cases where a corrective or other action is required, a copy of the inspection checklist shall be given to the owner/operator. It shall be the responsibility of the owner/operator to: (1) confirm that the specified action(s) is(are) completed, (2) sign and date the checklist and (3) return the checklist to the LSC within two weeks of the inspection date. Failure of the owner/operator to return the completed checklist may result in the issue of a Stop Work order.
9. Upon completion of the LSIs, the LSC shall file a report with the Chemistry Department Chair and Chemistry Department ES&H Coordinator. This report shall consist of a completed *Semiannual Chemistry Department Laser Safety Inspections Report* form and shall document that the inspections have been performed. In the event that non-compliance has been noted, a memo documenting any comments and concerns to the Chair and ES&H Coordinator shall also be included. The semiannual reports must be filed on or before the 15th day of February and August.
10. Following completion of the July LSI report, SOPs shall be reviewed. The LSC shall initiate the review process by sending the current electronic copy of each SOP to the responsible owner/operator. An updated version of the SOP shall be returned to the LSC within three weeks. The LSC will forward the updated SOPs to the LSO for review. Subsequently, the LSC shall convene meetings, attended by the LSO, the owner/operator, and the LSC, for the purpose of finalizing and authorizing the SOPs.

Acronyms:

BNL	Brookhaven National Laboratory	LSO	Laser Safety Officer
ES&H	Environmental Safety and Health	LSI	Laser Safety Inspection
LCA	Laser Controlled Area	SOP	Standard Operating Procedure
LSC	Laser Safety Coordinator		

Semiannual Laser Safety Inspection and Action Item Checklist

Room No.:		SOP Control No.:	
Owner/Operator:	<i>Print Name</i>	<i>Signature</i>	Date:
Inspector:	<i>Print Name</i>	<i>Signature</i>	Date:

A	P	Item	Required corrective or other action(s)
Administrative Controls			
		SOP authorizations current	
		Correct door signage in place	
Laser Inventory			
		SOP consistent with active inventory	
		New laser arrived or expected	
Personnel Authorizations			
		Web laser training current for all	
		Laser specific training current for all	
		SOP personnel list current	
		New users arrived or expected	
Door Interlock System			
		All active lasers interlocked	
		Logbook current	
Engineering Controls			
		Enclosures & barriers adequate	
		All beams properly terminated	
		Recent changes in NHZ / beam path	
		Recent changes in experimental geometry	
Personal Protection Equipment			
		Eyewear adequate and accessible	
		PPE for New lasers available	
Other			
		Power supply cabinets closed	
		Excimer laser ventilation	

A = Action required, P = Passed (No action required); If corrective or other action is required, owner/operator shall confirm that specified action is completed, sign and date below, and return this form within two weeks to the Chemistry Department Laser Safety Coordinator.

This space reserved for additional comments from the inspector and/or feedback from the owner/operator

I certify that the above specified actions have been completed.

<i>Print Name</i>	<i>Signature</i>	Date
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Semiannual Chemistry Department Laser Safety Inspections Report

Assessment Description: Building 555 Semiannual Laser Safety Inspection Report	
Scope of Assessment: Interlock logs (six-month interlock checks carried out – system in compliance for next 3 months) Laser SOPs (annual updates, signatures of all personnel, verification against active lasers in room) Laser Registration Records (all lasers in room properly registered).	
Conducted by: Laser Safety Coordinator N. Camillone (or delegate as approved by Chemistry Chair)	Date:
Persons contacted: At least one laser user/owner in each laser room to verify documentation/laser use for room.	
Procedures or documents reviewed: Interlock Logs, Laser SOPs, Laser Registration Records, Lab inspected	

Room Number	Document	Comments	Date
22 Wishart/Cook	Interlock Test SOP Registration	_____ _____	
115 Creutz	No Interlock No SOP Registration (2 class 2 lasers)	_____ _____	
121 DiMauro	Interlock Test SOP Registration	_____ _____	
127 White/Beuhler	Interlock Test SOP Registration	_____ _____	
221 Hahn	No interlock (3A rules apply) SOP Registration	_____ _____	
261 Fujita	Interlock Test SOP Registration	_____ _____	
306 Hall/Suits	Interlock Test SOP Registration	_____ _____	
321 Preses	Interlock Test SOP Registration	_____ _____	
323 Fockenber	Interlock Test SOP Registration	_____ _____	
325/327 Hall/Sears	Interlock Test SOP Registration	_____ _____	
329 Suits	Interlock Test SOP Registration	_____ _____	
353 Camillone	Interlock Test SOP Registration	_____ _____	