

NC State University Supervisor's Safety Self Assessment Checklist

This checklist is a tool to aid the supervisor and his/her employees in identifying those activities and conditions that need attention to achieve and maintain a safe work environment. This format was developed by the CALS Safety Committee (our thanks!) from the original EH&S checklist and has been adopted for University use.

Completion of this assessment fulfills the annual requirement for an inspection or self assessment as specified on the certification page of the Safety Plan. During the assessment process, note comments and reminders in the *Comment or Corrective Action Needed* column as necessary. When the appropriate action has been taken, note this in the *Date Completed* column.

Keep this checklist with your safety plan. It will allow for quick reference to identify actions not completed and will serve as an educational tool and useful reference for both staff and students.

Contact Ken_Kretchman@ncsu.edu with any questions or suggestions regarding this checklist.

College _____

Department _____

Building _____

Room(s) _____

Person Performing Inspection _____

Responsible Supervisor or Faculty Member _____

Signature _____

Inspection Date _____

NC State University Safety Self Assessment Checklist

Safety Self Assessment Checklist

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NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
A. OVERVIEW OF SUPERVISOR SAFETY RESPONSIBILITIES FOR THEIR EMPLOYEES				
<p>1. Supervisors may review their safety responsibilities and NC State Safety and Health requirements by visiting the website for the NC State Environmental Health and Safety (EH & S) home page.</p> <p>Follow this link: http://www.ncsu.edu/ncsu/ehs/www99/right/super/index.html</p>	<ul style="list-style-type: none"> • NC State policy • References many OSHA regulations e.g. • CFR1910.1200 Hazard communication • CFR1910.38 Employee emergency plans and fire prevention plan 	Follow link provided.		
<p>2. New employees, whether temporary or permanent, must receive appropriate safety training and orientation at the start of employment and before completing certain tasks.</p> <p>Employees should receive area specific orientation and training within the first day or two of hire and before starting certain tasks. Follow the link to view a generalized new employee safety orientation sheet. Note that the form directs each supervisor to tailor the form to fit the individual work place.</p> <p>Follow this link: http://www.ncsu.edu/ehs/www99/right/safeplan/newemplo.pdf</p>	<ul style="list-style-type: none"> • NC State policy • References many OSHA regulations • CFR1910.38 Employee emergency plans and fire prevention plans 	Provide appropriate orientation and training at the beginning of employment.		
<p>3. All employees who either work with chemicals or routinely access areas where chemicals are used must, at a minimum, complete the online Hazard Communication training program. Employees will receive job specific Hazard Communication from their manager or supervisor.</p> <p>Hazard communication training is required for all permanent and temporary employees exposed to chemicals while completing their tasks. New permanent employees receive this training as part of the new employee orientation (NEO) safety training provided through HR. Temporary employees exposed to chemicals must also receive this training. Current NC state employees who transfer into a position that results in potential exposure to chemicals must also attend the training. The online training can be completed by clicking the following link: http://www.ncsu.edu/ehs/hazcom/hazcom.htm</p> <p>Employees covered by a safety plan must receive annual training. Training must be documented.</p> <p>For more information contact Scott Mabry at 513-0988 or scott_mabry@ncsu.edu.</p>	<ul style="list-style-type: none"> • CFR1910.1200 Hazard communication • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	<p>Initial, general, hazard communication training provided through HR NEO.</p> <p>For Labs with a safety plan, must provide initial and annual area-specific training. Employees exposed to chemicals but are not covered by a safety plan must receive initial hazard communication training.</p>		

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<p>4. Supervisors should ensure that all permanent and temporary employees receive all necessary, periodic safety training updates.</p> <p>Supervisors should provide or arrange for the necessary safety training for each task before an employee begins that task. Safety should be incorporated into the on-the-job training so that it becomes part of the standard operating procedure. Supervisor responsibilities are listed and explained at:</p> <p>http://www.ncsu.edu/ncsu/ehs/www99/right/super/index.html.</p>	<ul style="list-style-type: none"> • CFR1910.38 Employee emergency plans and fire prevention plans • CFR1926.21 Safety Training • CFR 1926.20 Accident prevention programs 	Training is specific for each task and may be required only once, annually or some other specified time period.		
<p>5. Training is required for anyone who ships or transports any quantity of hazardous chemicals or hazardous materials.</p> <p>Personnel who ship or transport chemicals must be certified. Contact Todd Becker at 515-2895 or Todd_Becker@ncsu.edu.</p>	<ul style="list-style-type: none"> • 49 CFR Parts 100-185 Hazardous Materials Regulations 	Initial and repeat at least every 2 years.		
<p>6. Safety training records should be retained by the PI and by departments at a central location. Employees may have their own copies or may request to see file copies at any time.</p> <p>Safety training records and copies of all safety certifications should be maintained in a departmental file.</p>	<ul style="list-style-type: none"> • CFR1910.38 Employee emergency plans and fire prevention plans • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • As required by specific standards 	Be aware and comply.		
<p>7. Employees should be aware that they can report unsafe conditions anonymously. Emergency Dial 911</p> <p>Although employees should inform their supervisors of unsafe conditions in their workplace, there may be occasions where this may cause the employee discomfort. Employees should understand that they are protected under the OSHA act against the unlikely event of reprisal or intimidating supervisory actions due to reporting of unsafe conditions. If, for any reason, employees are uncomfortable reporting unsafe conditions through normal channels, Employees may call the Safety Hotline anonymously at 515-5445. The safety hotline can also be accessed at:</p> <p>http://www.ncsu.edu/ehs/hotline.htm</p>	<ul style="list-style-type: none"> • CFR1977 Discrimination against employees under OSHA Act of 1970. • §95-196. Employee rights. • § 95-136. Inspections. 	Contact NC State safety hotline at 515.5445.		

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<p>8. Employees are directly involved in workplace safety inspections, accident investigations, and near misses.</p> <p>Employees should be involved in safety inspections, accident investigations, and near misses. They may provide insight through experience with the work area and processes. The act of completing these exercises is educational because it brings to mind other activities and process that may benefit from a review. Please contact John Turek at 515-6871 or John_Turek@ncsu.edu</p> <p>Employees involved in an accident or near miss are required to complete the appropriate forms located at the following web address: http://www.ncsu.edu/ehs/accidents/occacc1.htm</p>	<ul style="list-style-type: none"> NCSU Safety Policy 	Be aware and comply.		
<p>9. Conduct and retain documentation of a personal protective equipment assessment for all work areas (Protective Equipment section, HSM).</p> <p>OSHA requires a written assessment of the need for protective equipment to be completed for the work area. Persons required to compile safety plans will complete this form on-line.</p> <p>Detailed information is available in the "Personal Protective Equipment" section of the Health and Safety Manual; located at http://www.ncsu.edu/ehs/www99/right/handsMan/worker/ppe/ind ex.html It may be necessary to separate the protective equipment assessment for field versus lab work.</p>	<ul style="list-style-type: none"> CFR1910 (Subpart I) CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories CFR 1910.1200 Hazard communication 	A PPE hazard assessment must be conducted for all work areas, not just those work areas that require a safety plan.		
<p>10. Appropriate safety equipment required for a given work area must be worn consistently. For laboratories, eye protection, lab coats and closed toe shoes are required at a minimum,</p> <p>Protective equipment identified as necessary for the work area must be worn. Focus on the consistent use of safety glasses as a priority action item if <i>any</i> eye hazards are present in your work area, then add other components identified as necessary. Casual visitors must be provided equipment if they must cross an "area" identified as requiring safety equipment, for instance, safety glasses. Follow link to: http://www.ncsu.edu/ehs/www99/right/handsMan/worker/ppe/ind ex.html</p>	<ul style="list-style-type: none"> CFR 1910.132 - 139 (subpart I) 	Employers must provide required PPE to employees.		
<p>11. A current safety plan must be present and readily available in each location where hazardous processes are conducted and where hazardous materials or equipment are used.</p> <p>All sites with hazardous chemicals, biological material, hazardous equipment, or physical hazards must have an approved Safety Plan. This also includes hazardous material storage areas. A printed copy of the safety plan will be posted in the respective area. The plan must be the current version. The plans are updated annually with notification going to the responsible party 30 days before the <u>expiration date</u>. Additional updates are necessary whenever new processes and/or new hazardous materials are used. Please contact Mahdi Fahim at 513-1282 or mahdi_fahim@ncsu.edu if you have questions about the status of your safety plan. http://www.ncsu.edu/ehs/safetyplan/index.html</p>	<ul style="list-style-type: none"> CFR 1910.1450 Occupational exposure to hazardous chemicals in laboratories CFR 1910.38 Employee emergency pans and fire prevention plans 	Update safety plan annually.		

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B. GENERAL HOUSEKEEPING AND FACILITY MAINTENANCE				
<p>12. Applicable warning signs and up-to-date names of responsible persons to contact in case of emergency must be posted at the entrance to any workspace.</p> <p>All laboratories and other designated work areas where hazardous materials/equipment are used (including hazardous material storage areas) will have warning signs indicating the hazards in the area posted on the main entrance door to the work area. Fill out and submit online a new door sign request form if a sign is lacking, outdated or inaccurate. Signage should be updated to reflect current hazards and contact information: http://www.ncsu.edu/ehs/safetyplan/Lab_Door_Sign.pdf</p>	<ul style="list-style-type: none"> CFR1910.38 Employee emergency plans and fire prevention plans 	Signage updated as needed.		
<p>13. Specific hazards in work areas must be clearly identified with posted signs (e.g., eye hazard, high voltage hazard, hearing protection required).</p> <p>Proper signs are important to indicate work area hazards. Contact Mahdi Fahim at 515-1282 or mahdi_fahim@ncsu.edu</p>	<ul style="list-style-type: none"> CFR 1910.1910.145 Specifications for accident prevention signs and tags 	Be aware and comply		
<p>14. The appropriate emergency telephone number should be posted at permanently located phones.</p> <p>Dial 911. This appropriate emergency phone number should be readily visible at each phone. High visibility stickers are available through Public Safety for campus use. If the building or specific location of the caller is not tied into the 911 system, give specific verbal directions to the emergency dispatcher.</p>	<ul style="list-style-type: none"> CFR1910.38 Employee emergency plans and fire prevention plans CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Update information as needed.		
<p>15. Emergency evacuation routes must be kept clear of obstructions.</p> <p>Evacuation routes should be posted and must be kept clear. The main exit routes within your work area should have a minimum clearance of 36 inches. Larger clearances are typically required for building exit corridors. Also, adequate space of 36 inches should be maintained around fixed equipment for maintenance access.</p>	<ul style="list-style-type: none"> NFPA 101-1970, Life safety code DOI NC Fire/Building code 	Each PI should ensure that their property does not obstruct evacuation routes.		
<p>16. Food and drinks must be kept out of the work areas unless they are part of a research project.</p> <p>Food and drink must be kept out of work areas that require a safety plan and/or where hazardous materials are used/stored, unless the food and or drink is involved directly in research.</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Inform all personnel.		
<p>17. Regular self inspections of all work areas should be performed at least annually. Corrective actions and deficiencies should be documented.</p> <p>Retain a copy of your completed safety self assessment checklist. If you have a safety plan, keep the self-inspection with your plan in your work area. You should refer to it when future inspections are performed. This inspection is recommended at least annually. Follow link to: http://www.ncsu.edu/ehs/www99/right/super/NCSUSafetySelfAssesment.pdf</p>	<ul style="list-style-type: none"> CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories) § 95-136. Inspections. § 95-143. Inspections. 	Inspect documentation.		

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<p>18. All items on shelves must have a minimum clearance of 18 inches from sprinkler heads, heating pipes, and lighting fixtures.</p> <p>This requirement applies to rooms with sprinklers. It is important to maintain at least a 24-inch clearance from stored items to ceiling to prevent reduction of sprinkler water discharge coverage and to avoid overheating (fire) due to material storage next to hot surfaces. The 24-inch clearance is in all directions.</p>	<ul style="list-style-type: none"> • NFPA • NC Fire Code 	Be aware and comply.		
<p>19. The work area must be kept free of unnecessary clutter.</p> <p>Good housekeeping should be practiced in labs and work areas. Unused materials and equipment should be stored properly or discarded as necessary. Chemical wastes should be disposed of promptly and work surfaces should be free of chemical residues.</p>	<ul style="list-style-type: none"> • CFR1910.22 walking working surfaces • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • DOI 	Be aware and comply.		
<p>20. Fire extinguishers must be readily accessible and unobstructed.</p> <p>Employees should know where all the fire extinguishers in their work area are located. Extinguisher locations must not be obstructed with storage of other objects. Only persons who have been trained in the use of fire extinguishers may use them. Contact the Fire Protection Division of Public Safety if you wish to receive fire extinguisher training. If you are using materials, which require special extinguishing agents (e.g. flammable metal powders) you can contact Fire Protection to request a suitable extinguisher for your work area. Contact: bill_stevenson@ncsu.edu or firesafetyhelp@gw.ncsu.edu for questions or assistance.</p> <p>Fire extinguisher training is available through NC State's Department of Public Safety- Fire Protection Division. Call 515-2568 to schedule training. A brief summary of what to do in case of a fire is available at http://www.ncsu.edu/ncsu/public_safety/Protection/EmergencyProcedures.html - fires</p>	<ul style="list-style-type: none"> • CFR1910.157 Portable fire extinguishers • NFPA 10 • NC Fire Code (510.1) • NC Building Code (402.15) 	Initial and annual training. Path to fire extinguishers must be unobstructed.		
<p>21. Modifications to buildings are performed only by authorized employees or companies contracted through NC State facilities maintenance organizations.</p> <p>Modifications to facilities include painting, adding electrical fixtures, cable, exhaust ventilation equipment or other applications where building materials may be disturbed; including scraping or sanding painted surfaces. Modifications must be completed by authorized facilities personnel or by contractors working under the facilities maintenance organizations. Risks associated with unauthorized work include potential exposure to lead or asbestos, although this covers safety risks from any modification that is not done according to accepted codes and regulations. Generate a building modification request or work order for all modifications. A directory of services provided by Facilities Operations is available at http://www.ncsu.edu/policies/finance/facilities/REG07.25.1.php</p>	<ul style="list-style-type: none"> • DOI • CFR1910.1001 Toxic and hazardous substances - asbestos • 1910.1025 Toxic and hazardous substances - lead 	See building liaison or department office to initiate work order.		

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C. MEDICAL SURVEILLANCE, FIRST AID AND MEDICAL EMERGENCIES				
<p>22. Personnel must have access to first aid kits.</p> <p>Each work area should contain a readily accessible first aid kit. Supervisors with multiple labs located adjacent to each other may choose to use one kit, rather than stock one in each lab. All employees should be advised of its location and the minimum contents required. Someone should be assigned responsibility for periodic (quarterly) review of the contents. This person should also be notified when supplies are expended to refill the kit. If you need additional assistance, contact Bill Stevenson at 515-2568 or mailto:Bill_Stevenson@ncsu.edu. A suggested list of appropriate Safety kit contents is located at http://www.ncsu.edu/ehs/www99/right/handsMan/factsheet/firstaid.html</p>	<ul style="list-style-type: none"> • CFR1910.38 Employee emergency plans and fire prevention plans • CFR1910.151 First aid kits. 	<p>Lab kits: check initially and quarterly.</p> <p>Vehicle kits: Check quarterly and prior to each expedition.</p>		
<p>23. Personnel must have access to emergency assistance anywhere within the United States.</p> <p>In the event of an emergency, dial 911.</p> <p>Personnel who work away from main campus should know the appropriate emergency number to call no matter where they are located. This number SHALL be posted at or near a telephone or other appropriate location in the building where personnel are stationed or working. This number SHALL be shared with new employees at orientation at the facility.</p>	<ul style="list-style-type: none"> • CFR1910.38 Employee emergency plans and fire prevention plans • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	<p>Training must include procedures and appropriate emergency contact information for each work area.</p>		

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<p>24. Employees must report all accidents and near misses to their supervisor.</p> <p>Instruct employees to report all work related injuries, illnesses, and near misses promptly. Employees need to report accidents and near misses so that appropriate corrective action can be taken to prevent future incidents in the workplace. For more information, see Occupational Accident, Illness, and Reports at http://ncsu.edu/ehs/accidents/occacc1.htm or contact John Turek at 515-6871 John_Turek@ncsu.edu</p> <p>1) Emergency treatment: Dial 911 to request an ambulance for anyone severely injured in any capacity while on main campus. Public Safety will contact EMS for transport and will report to the scene to provide additional assistance.</p> <p>2) Non-emergency treatment is available at several locations in Wake County. The supervisor will call one of the numbers listed to see who can accommodate the injured or ill employee. Employees working outside of Wake County need to carry the list of Key Risk Clinics with them. A list of Key Risk clinics in other counties is available from Human Resources 515-2150 or http://www7.acs.ncsu.edu/hr/benefits/wrk_comp.asp</p> <p>Note: EPA, SPA, Temporary employees, and Undergraduate employees receiving a paycheck must follow this procedure. Graduate students and Post Docs can either go to Student Health Services or to a designated health care provider</p> <p>3) After hours, weekends and holidays, for non-emergency treatment contact Public Safety at 911.</p> <p>A reference guide of Workers Compensation benefits is located at: http://www.ncsu.edu/human_resources/benefits/pdf/sprwrkrscomp.pdf</p>	<ul style="list-style-type: none"> • CFR 1910.104 Recording and Reporting Occupational Injuries and Illnesses • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	<p>Report all accidents and near-misses</p> <p>Accident documentation training is available.</p> <p>Submit completed forms to John Turek – Campus Box 8007</p>		
<p>25. Employers have identified what, if any, medical examinations are required for employees who work in this area (Medical Surveillance section, HSM)</p> <p>Supervisors should review the "Medical Surveillance" section of the Health and Safety Manual to determine if exams may be required for their employees. For instance, respirator use is subject to medical approval. Other medical exams may be required for the use of specific chemicals. Employees must undergo medical evaluation to perform diving operations. Follow the link to http://www.ncsu.edu/ncsu/ehs/www99/right/handsMan/worker/med.html</p> <p>Exposure and medical records will be maintained at Student Health Services for 30 years beyond the termination date for employees. Employees may send a written request for a copy of their records to: Student Health Services; ATTN: Medical Records; Campus Box 7304; Raleigh, NC 27695</p>	<ul style="list-style-type: none"> • CFR 1910 subpart Z • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • NC State policy 	<p>Be aware and comply.</p>		

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<p>26. Health Recommendation Forms (HRF) are maintained in departmental files.</p> <p>If medical exams are conducted on employees, their supervisors receive a health recommendation form (HRF) from the physician. An HRF states if there are, or are not, restrictions on an employee to perform a task. No additional information is available to the supervisor. Under no circumstances can a supervisor gain access to an employee's confidential medical information. Detailed results of exams are provided to the employee only. The HRF needs to be maintained in the employee's department personnel record. Medical evaluations are often subject to periodic updates. Keep track of when an employee needs to either re-submit a form or be re-scheduled for an examination. Employees must be informed annually that they may have access to both their occupational exposure and medical records. For additional information, contact Gary Shaver at 515-6862 or Gary_Shaver@ncsu.edu</p>	<ul style="list-style-type: none"> CFR 1910.1020 Access to employee exposure and medical records) 	<p>Maintain HRFs.</p> <p>Provide annual training on employee access to medical and exposure records.</p>		
<p>27. If noise levels make ordinary speech difficult, contact EH & S.</p> <p>Employees exposed to high noise levels are automatically included in the NC State hearing conservation program. However, employees may be disturbed by noise levels that are below the legal limit. Employees are encouraged to discuss ways of reducing their exposure to irritating and harmful noise levels by contacting Gary Shaver at 515-6862 or Gary_Shaver@ncsu.edu. Additional information is available at: http://www.ncsu.edu/ncsu/ehs/www99/right/handsMan/worker/hearing.html</p>	<ul style="list-style-type: none"> CFR 1910.95 Occupational noise exposure 	<p>Annual training and audiometric screening.</p> <p>Request noise level readings.</p> <p>Sufficiently high noise levels trigger monitoring program.</p>		
<p>28. Respirator use must be pre-approved by EH & S.</p> <p>A respirator may be required to protect against dusts, vapors, fumes or gases. Respirator use must be pre- approved by EH&S in order to meet OSHA requirements. Respirator users must receive annual training on respirator fitting and use. Respirator users are required to have a medical exam or questionnaire review. Please see this site for additional information: http://www.ncsu.edu/ehs/www99/right/handsMan/worker/resp/resp.html</p> <p>For additional information, contact Gary Shaver at 515-6862 or Gary_Shaver@ncsu.edu</p>	<ul style="list-style-type: none"> CFR 1910.134 Respiratory protection 	<p>Initial and annual respiratory training is required.</p> <p>Medical exam required.</p>		
<p>29. Disposable dust masks may be approved for use in some areas.</p> <p>Tasks completed in non-hazardous, dusty areas may be performed using dust masks voluntarily with a N-95 rating. While this use of the dust mask does not require a medical examination, all employees who wish to use dust masks must contact Amit Patel at 513-0647or Amit_Patel@ncsu.edu</p>	<ul style="list-style-type: none"> CFR 1910.134 Respiratory protection; appendix D 	<p>No medical exam required prior to use. Provide the dust mask use form.</p> <p>Contact Amit Patel before using.</p>		

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<p>30. Employees who come in physical contact with any animal species (e.g., insects, fish, mammals, birds), their bedding, or holding areas must receive appropriate training.</p> <p>Training requirements are species specific. For further information about IACUC and AALAC requirements contact Judy Schledorn at 515-7507 or mailto:iacuc@ncsu.edu</p> <p>Employee participation in the medical surveillance program for animal handlers is based on the number of contact hours and type of contact. Employees may become sensitive to airborne dander or secretions from various animals. Employees should inform their employer if any new allergies develop.</p> <p>For more information about the NC State Animal Contact Program, please refer to: http://www.ncsu.edu/ehs/www99/right/handsMan/animal/animal.html</p>	<ul style="list-style-type: none"> • IACUC • AALAC • NC State Medical Surveillance Policy • NCSU Animal Contact Program 	Provide necessary training and medical surveillance.		
D. ELECTRICAL SAFETY FOR OFFICE, LAB, MAINTENANCE, AND FIELD EMPLOYEES				
<p>31. All persons who perform installation, inspection, service, or maintenance on machinery and equipment must be protected from the unexpected startup or release of hazardous energy.</p> <p>Persons who perform inspection, service, or maintenance on energized equipment >50 volts AC ("Energized Work") require specific training according to OSHA and NFPA 70-E standards. If you have the need to perform this type of work, please contact John Turek at 515-6871 John_Turek@ncsu.edu for additional training requirements. Otherwise, this work should be left to a contractor, equipment vendor, or an Authorized and Qualified NC State employee(s). Please refer to: http://www.ncsu.edu/ehs/electrical_safety/authorized.htm</p>	<ul style="list-style-type: none"> • CFR 1910.147 Control of Hazardous Energy (Lockout Tagout) • NFPA 70-E Standard for Electrical Safety in the Workplace 	Obtain Training		
<p>32. Do not alter ground prong for line cord.</p> <p>Check equipment that was originally equipped with a three pronged line cord plug to assure that the ground prong has not been broken or removed.</p>	<ul style="list-style-type: none"> • CFR 1910.304(f)(5)(v) • CFR 1910.334(a)(3) 	Inspect cords before use Remove damaged equipment from use		
<p>33. All electrical cords must be free of fraying and in good condition.</p> <p>Electrical cords should not show separation (pulling away of the wire from the plug), fraying, or other breakdown of the insulation. Do not splice cords unless you are Authorized and Qualified to do so. http://www.ncsu.edu/ehs/electrical_safety/authorized.htm Worn cords present both shock and fire hazards.</p>	<ul style="list-style-type: none"> • CFR 1910.334(a)(2)(ii) • CFR 1926.416(e)(i) 	Inspect cords before each use. Remove damaged equipment from use		

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<p>34. Minimize the use of extension cords.</p> <p>Equipment used in labs or other work areas should be permanently wired. OSHA regulations limit use of extension cords to 90 days of use. Fused, multi-outlet strips are considered to be extension cords but they are still preferable to the standard extension cords that offer no protection. Where additional outlets are needed, use fused multi-outlet strips with circuit protection in lieu of extension cords. Whenever possible, run cords along walls and off floors. Cords may not be run through floors, walls or ceilings to other rooms for any reason. If a room does not have an electrical outlet, contact Facilities Operations to submit a maintenance work request.</p>	<ul style="list-style-type: none"> CFR 1910.305(g)(1)(iii) (A) Flexible Cords and Cables CFR 1910.305(a)(2) Temporary Wiring CFR 1910.303(b)(2) Listed and Labeled Equipment Used as Intended 	Be aware and comply.		
<p>35. Electrical cords that span floors and walkways must be properly protected and covered to prevent tripping.</p> <p>Cords should only be placed on the floor as a last resort. Tape the cords down or place bridging over the cords to minimize tripping hazards.</p>	<ul style="list-style-type: none"> CFR 1910.305(a)(2)(iii)(G) Protected CRF 1910.22 Walking and Working Surfaces 	Be aware and comply.		
<p>36. Cover plates must be securely in place on all receptacles and switches.</p> <p>Receptacles should be covered and equipment plates should be in place before use.</p>	<ul style="list-style-type: none"> CFR 1910.333 General Safety-Related Work Practices 	Be aware and comply.		
<p>37. Electrical equipment (particularly high voltage equipment and coupling surfaces such as laser tables) must be properly grounded.</p> <p>It is very important that high voltage equipment is properly grounded. For example, metal tables housing high voltage equipment, such as lasers and power supplies will need to be grounded. Equipment plates should always be in place before equipment is operated. Obtain the necessary assistance to perform a careful inspection.</p>	<ul style="list-style-type: none"> CFR 1910.302(b)(1) Electrical Installations CFR 1926.404 Wiring Design and Protection 	Be aware and comply		
E. HAZARDOUS EQUIPMENT AND MATERIALS				
<p>38. A review is required prior to start-up of potentially hazardous equipment and processes.</p> <p>New or modified tasks or processes involving hazardous materials or equipment should be reviewed using the BOCCE hazard review process which is a self paced review tool. www.ncsu.edu/ehs/2010/BOCCE/</p> <p>In some cases such as new processes involving work with nanoparticles or nanofibers, semiconductor equipment, class 3b and 4 lasers, pressure vessels, and non-standard lab equipment using hazardous gases or high volume chemicals, a more detailed hazard review involving EH&S is required. Additional information may be obtained by calling Ken Kretchman 515-6860 or mailto:Ken_Kretchman@ncsu.edu or by reviewing information at http://www.ncsu.edu/ehs/www99/right/handsMan/worker/hazrev.html</p>	<ul style="list-style-type: none"> CFR 1910.1450 Occupational exposure to hazardous chemicals in laboratories 	<p>Contact EH & S for assistance in conducting a hazard review.</p> <p>Initial review only unless the process or equipment changes.</p>		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>39. Plans for all pressure vessels (greater than 15 psig) to be built, procured, or obtained through donation, must be reviewed by EH&S.</p> <p>All pressure vessels (greater than 15 psig) need to have their design reviewed at the earliest possible time (prior to construction, purchase, or acceptance of a donation) by EH&S. This does not apply to gas cylinders or facilities equipment managed by Facilities Operations such as boilers or heat exchangers. Contact Harold Morton at 513-1422 or email Harold_Morton@ncsu.edu</p>	<ul style="list-style-type: none"> § 95-69.18. Inspection certificates required 	Be aware and comply.		
<p>40. Equipment that generates significant electric or magnetic field must be reported to EH&S.</p> <p>Contact Bill Crocker at 515-8658 or email Bill_Crocker@ncsu.edu if you have equipment that may generate high electric or magnetic fields. Examples of equipment which should be reported include steady (dc) magnets that could generate fields above 5G, induction heaters, diathermy equipment, plasma processing equipment, radio frequency (rf) sealers and heaters, other rf gear capable of radiating over 1W between 3kHz and 300 Ghz or emitting over 100W, equipment that operates above 2.5 kV without electric field shielding, or equipment operating above 100A.</p>	<ul style="list-style-type: none"> CFR 1910.97 Non-ionizing radiation 	Contact EH & PS Initial Operator Training.		
<p>41. Certain equipment needs EH&S safety review / approval prior to purchase.</p> <p>Prior to purchase of equipment including , BUT NOT LIMITED TO, radiation producing devices, class 3B or 4 lasers, gas monitors, , respirators, or fume hoods and biological safety cabinets, the appropriate EH&S contact point listed in http://www.ncsu.edu/ehs/www99/right/handsMan/worker/forms/equip4.pdf must be contacted prior to purchase to assure the appropriate equipment is procured, the necessary engineering controls are in place, appropriate equipment layout, and safety training is received prior to use. For additional information, please contact Ken Kretchman at 515-6860 or mailto:ken_kretchman@ncsu.edu</p>	<ul style="list-style-type: none"> NC State Policy 	Be aware and comply.		
<p>42. Shields must be in place on equipment that presents an implosion risk (e.g., glass vacuum gauges).</p> <p>Glassware under vacuum poses the risk of implosion. Glass vacuum gauges are one example. Adequate shielding should be installed around such equipment. Contact Harold Morton at 513-1422 or email Harold_Morton@ncsu.edu</p>	<ul style="list-style-type: none"> NFPA 45 	Be aware and comply.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>43. Any machine part, function, or process that may cause injury must be safeguarded. One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks.</p> <p>Where the operation of a machine or accidental contact with it can injure the operator or others in the vicinity, the hazard must be either eliminated or controlled. Guards removed for maintenance need to be replaced prior to startup.</p> <p>If you this type of equipment or have questions regarding such equipment, please contact John Turek at 515-6871 John_Turek@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR 1910.212 General • CFR 1910.215 Abrasive Wheel • CFR 1910.216 Mills • CFR 1910.217 Mechanical Power Presses • CFR 1910.218 Forging Machines • CFR 1910.219 Mechanical Power Transmission • CFR 1910.262 Textiles 	Be aware and comply.		
F. GENERAL WORK ACTIVITIES COVERED BY SPECIFIC OSHA STANDARDS				
<p>44. Employees must be trained to safely isolate and remove all residual stored energy (e.g., electrical, pneumatic, steam, charged gas lines) before performing maintenance or service on machines and equipment. This information needs to be understood by all university personnel (e.g., lab, field, and maintenance) who perform Installation, service, maintenance, and demolition activities.</p> <p>Lockout / tagout procedures are required when maintenance and service work is performed on machines and equipment. Cord and plug equipment can be unplugged as long as the plug end remains under the exclusive control of, and visible to, the person conducting maintenance and service. OSHA requires lockout / tagout training for persons who service and maintain machines and equipment. Even those who work in an area where lockout/tagout procedures are in effect must receive training. OSHA also mandates that periodic inspections be conducted Contact John Turek at 515-6871 John_Turek@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR 1910.147 The control of hazardous energy (lockout/ tagout) 	Initial Training and Refresher training every three years		
<p>45. Permit-required confined spaces (e.g., tanks, vessels, storage bins, silos) must be cataloged and identified with a sign.</p> <p>Specific procedures are needed for entry into permit-required confined spaces. Confined spaces are spaces that are large enough to enter, are not designed for continuous occupancy, and have a restricted means to exit.</p> <p>All confined spaces must be catalogued in a single database for NC State. If you have any confined spaces, or would like additional information, contact Bill Crocker at 515-8658 or Bill_Crocker@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.146 Permit-required confined spaces 	<p>Initial training for entering permit-required confined spaces.</p> <p>Initial training for use of monitoring equipment.</p> <p>Recommend refresher training</p> <p>Label permit-required confined spaces.</p>		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>46. Employees who work on ladders, aerial work platforms, scaffolding, etc., or who perform elevated work that is greater than 6 feet above a lower work surface (measured foot to surface) must be properly trained.</p> <p>Refer to the Fall Protection section of the EH&S Health and Safety Manual for additional information and data. http://www.ncsu.edu/ehs/healthsafety_man.htm</p> <p>Contact John Turek at 515-6871 John_Turek@ncsu.edu</p>	<p>The following regulations all relate to fall protection:</p> <ul style="list-style-type: none"> • CFR 1910.23 Guarding Floor and Wall Openings • CFR 1910.132 PPE General • CFR 1910.269 (g)(2) Fall Protection – Power Generation • CFR 1926.500 Fall Protection • CFR 1910.66 Powered platforms for building maintenance • CFR1926.500 Fall Protection 	<p>Initial Training and Refresher training as required</p>		
<p>47. All hoists, cranes, and associated equipment must be inspected and Operators trained (Hoist and Crane Safety section of the EH&S Health and Safety Manual).</p> <p>Cranes and hoists must be inspected daily or prior to each day's use. Hoist and Crane operators need training prior to using the equipment. The department Supervisor shall maintain training records. A notice of the current annual inspection will need to be posted on the crane. An annual inspection of the hoisting machinery shall be made by a competent person or by a government or private agency recognized by the U.S. Department of Labor. The employer shall maintain a record of the dates and results of inspections for each hoisting machine and piece of equipment. See the Hoist and Crane section of the EH&S Safety Manual for additional information: http://www.ncsu.edu/ncsu/ehs/www99/right/handsMan/workplace/hoist.html Contact John Turek at 515-6871 or John_Turek@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.179 Overhead and gantry cranes • CFR 1926.550 Cranes and Derricks 	<p>Periodic hoist inspections.</p> <p>Maintain records of the inspections.</p> <p>Initial training and follow-up training as needed</p>		
<p>48. Employees who operate forklifts or other powered vehicles have received appropriate training.</p> <p>Employees must receive specific classroom and on the job training before they can operate a forklift. Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. Contact John Turek at 515-6871 or Email John_Turek@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.178 Powered industrial trucks 	<p>Initial training and every 3 years.</p> <p>Training certification is offered by the forklift vendor</p>		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
G. CHEMICAL USE				
<p>49. Air sampling or special controls may be needed for some chemicals you use.</p> <p>Check your chemical inventory against the list of OSHA regulated chemicals and carcinogens, and conditions listed in the Exposure Prevention and Assessment Section at http://www.ncsu.edu/ehs/www99/right/handsMan/lab/exposure%20prevention.pdf</p> <p>For information concerning lab operations contact Mahdi Fahim at 513-1282 or mahdi_fahim@ncsu.edu. For information concerning non-laboratory operations contact Gary Shaver at 515-6862 or gary_shaver@ncsu.edu</p>	<ul style="list-style-type: none"> CFR1910.1000 Air contaminants CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Initial and annual training.		
<p>50. Material Safety Data Sheets (MSDS) are to be available to all persons on all shifts Wherever hazardous chemicals are in use.</p> <p>MSDSs for all chemicals used/stored may be made available either via the Internet or stored as hardcopies in a notebook. Electronic copies of MSDSs are available for many chemicals. A database of MSDSs in a common format is accessible from NC State IP addresses at:</p> <p>http://www.ncsu.edu/ehs/MSDS.htm. MSDS must be readily available to all workers on all shifts.</p> <p>Store MSDSs in alphabetical order by the commonly accepted name of the product. This may be the trade name, the common name or an acronym. Develop a table of contents for your MSDSs. Place the trade name of the product in the first column, the Manufacturer's name in the second column, the date of the MSDS in the third column and location of the product in the fourth. For assistance contact Scott Mabry at 513-0988 or scott_mabry@ncsu.edu</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Initial hazard communication training. Current MSDSs must be readily available for each product.		
<p>51. All chemical laboratory hoods and laminar flow chemical hoods must be inspected annually.</p> <p>Exhausted workstations should be inspected every twelve months for proper airflow. An inspection sticker is placed on each workspace at the time it is inspected that indicates both the airflow rating and the date the unit was inspected. Hoods that are past due for inspection (more than 12 months) or that lack an inspection sticker entirely should be brought to the attention of EHSC:</p> <ul style="list-style-type: none"> Contact Mahdi Fahim at 513-1282 or Chemical_Hood_Program@ncsu.edu <p>Ensure proper operation of fume hoods and all other exhaust devices before use.</p> <p>Additional information is available at</p> <p>http://www.ncsu.edu/ehs/www99/right/handsMan/lab/exhmpg2.html</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Annual inspection by EHSC		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>52. Fume hoods and exhausted laminar flow hoods are designed to work at 18" or lower sash heights At sash heights higher than 18", university fume hoods will not supply adequate airflow (you may hear an audible alarm at this increased height to indicate this problem). Exhausted laminar flow hoods (mostly used in clean rooms) are designed for 11"-12" sash heights Studies conducted at MIT and by other researchers have found that the position of the hood sash is the key factor in effective hood performance. Even with adequate air velocities, hoods with sashes raised to full height were not found to be protective. . Do not block the airflow. Close the sash when hood is not in use to save energy and to increase safety Do not use fume hoods for chemical/waste storage. Also, while using the hood, lower the sash so it can operate as a physical barrier against chemical splash/explosion impact. Observe the "Recommended Chemical Hood Use Procedures" on our webpage at http://www.ncsu.edu/ehs/hood/chemicalhood.htm. Other fume hood requirements are available at http://www.ncsu.edu/ehs/www99/right/handsMan/lab/exhmpg2.html</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Be aware and comply.		
<p>53. Chemical quantities and container sizes (including gas cylinders) in the work area should be limited to the amount necessary for current operations.</p> <p>Stockpiled chemicals and gas cylinders can increase the magnitude of a chemical incident and may also increase the storage quantities beyond the limitations of the NC building codes. Avoid large chemical containers (5-gallon or larger) due to increased risk of fire and exposure, specifically during transferring chemicals to smaller containers for use. Stockpiling can also lead to improper storage practices such as floor storage of hazardous chemicals and unnecessary disposal costs if more material is ordered than needed. As a general rule, chemical quantities should not exceed the amount needed for a few months, less if practical. Containers that are larger than one gallon (or 4 liters) should only be used where large quantities of material are needed at a given time. Otherwise, smaller containers are easier to handle and present a smaller spill if mishandled. Hazardous gas cylinders should be sized to last no more than one year.</p> <p>New employees must complete the Manager's Safety Orientation checklist and CHP/CSG document. link: http://www.ncsu.edu/ehs/safetyplan/newemplo.pdf Area specific information regarding the physical and health hazards associated with the chemicals used will be addressed by the supervisor. For more information, contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Be aware and comply.		
<p>54. Labeling for secondary containers should be the responsibility of the person who actually fills the secondary container. In addition to the name and hazards of the product, it is important for that same individual to initial and date the container.</p> <p>All containers must be labeled with at least the name of the chemical, hazard class, and date (e.g., acetone, flammable, 1/1/2011). Containers with unknown contents are considered a serious safety issue. The Principle Investigator is responsible for</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Be aware and comply.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
all costs incurred for product analysis and disposal of unlabeled containers. Original manufacturer ' s container labels must not be obscured while the material is in storage or use. For additional information contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu .				
<p>55. All highly toxic chemicals such as potassium or sodium cyanide and special hazard materials such as perchloric acid must be stored in a secured area and only used with supervisor's specific authorization</p> <p>Store highly toxic compounds such as potassium or sodium cyanide in a locked enclosure when not in immediate use. Use/storage of these chemicals must be kept as minimum as possible. Poisons and other highly hazardous chemicals should be handled by persons specifically pre-authorized by their supervisors.</p> <p>Perchloric acid should be used only if a suitable substitute is not available. It must be used in a hood designed and pre-approved for this purpose (this is usually a specially constructed water wash down fume hood). Do not use perchloric acid in a conventional (non-perchloric acid) hood, unless your protocol is reviewed and approved by EHSC (in writing). Purchase 60% or lower concentrations of perchloric acid. Contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu for more information.</p>	<ul style="list-style-type: none"> • CFR1910.1200 Hazard communication • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • NFPA 45 	<p>Initial and annual hazard communication training.</p> <p>Must be addressed in the safety plan.</p>		
<p>56. Incompatible chemicals (flammables and oxidizers, acids and bases, etc.) must be stored separately.</p> <p>Flammable liquids should be stored separate from oxidizers such as Perchloric , nitric, and sulfuric acids and hydrogen peroxide. Acids should be separated from bases. Perchloric acid should be diluted, if possible, prior to storage. User's training is required. Storage compatibility information is available in the ACS hand book, <i>Safety in Academic Chemistry Labs</i>: http://www.che.ncsu.edu/research/documents/SACL_Students.pdf</p> <p>Also see: http://www.ncsu.edu/ehs/www99/right/handsMan/lab/Storage%20Groups.pdf</p> <p>Contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu</p> <p>New employees must complete the Manager's Safety Orientation checklist and CHP/CSG document. Follow the link:: http://www.ncsu.edu/ehs/safetyplan/newemplo.pdf</p> <p>Chemical compatibility should be covered in you group's annual hazard communication training.</p>	<ul style="list-style-type: none"> • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • NFPA 45 • CFR1910.1200 Hazard communication 	<p>Store products as required.</p> <p>Initial and annual training.</p>		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>57. Chemicals that may become more hazardous with age (e.g., ethers and other peroxide forming chemicals) must be dated upon receipt and disposed before their expiration date.</p> <p>All chemicals that become more hazardous with age should be dated upon receipt and once opened. Sealed containers need to be disposed of before their expiration date. Opened containers shall not be kept beyond 12 months after opening. In specific cases, chemicals may need to be tested for peroxide formation before use. For more information on the dangers of aging chemicals consult our "Danger: Peroxidizable Chemicals" webpage at: http://www.ncsu.edu/ehs/www99/right/handsMan/lab/Peroxide.pdf. Examples of the common lab materials that fall into this category include ether, ethyl ether, isopropyl ether, and tetrahydrofuran. Refer to the MSDS for information on storage compatibility. Secondary containment trays provide an effective barrier in the event of a spill or leak.</p> <p>For Chemical Reactivity Hazards, including reactive chemicals (self-reacting materials such as pyrophorics) and uncontrolled chemical reactions (e.g. incompatibilities) see OSHA Chemical Reactivity Hazards web site for useful links: http://www.osha.gov/SLTC/reactivechemicals/index.html</p> <p>Dangers associated with chemical aging and chemical reactivity hazards must be covered in your safety plan and group's annual safety training.</p> <p>For more information you may contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • NFPA 45 • CFR1910.1200 Hazard communication • CFR1910. Process safety management of highly hazardous chemicals 	<p>Be aware and comply.</p> <p>Initial and annual hazard communication training.</p>		
<p>58. Large quantities of flammable liquids must be stored in approved safety cans and flammable storage cabinets.</p> <p>Flammable liquids that are not in current use should be stored in approved flammable storage cabinets. Limited quantities of in-use flammable liquids (pint container or less) may be stored in non-breakable plastic bottles on lab bench shelving. Use a chemical hood when dispensing flammable liquids. For more information about storing flammable materials, contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu</p> <p>Helpful links: http://www.ncsu.edu/ehs/www99/right/handsMan/lab/flam.html http://www.ncsu.edu/ehs/www99/right/handsMan/FlammableandToxicChemicalsDispensingSafety.pdf</p>	<ul style="list-style-type: none"> • CFR 1910.106 Flammable liquids • CFR 1910.1200 Hazard communication • NFPA 45 	<p>Be aware and comply.</p>		
<p>59. Chemicals should not be stored on the floor.</p> <p>Floor storage of chemicals, including waste should be avoided. For processes with continuous liquid waste effluent, emphasis must be placed on keeping waste containers away from lab doors and exit pathways and the use of secondary containment (tray under container). Secondary containment trays provide an effective barrier in the event of a spill or leak.</p>	<ul style="list-style-type: none"> • NFPA Life Safety Code 101 • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	<p>Be aware and comply.</p>		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>60. Chemicals that require refrigeration must be stored in non-sparking chemical storage refrigerators.</p> <p>Standard residential refrigerators and walk-in cold rooms are not appropriate for storing flammable chemicals. However, it is neither cost effective nor necessary to purchase an explosion-proof refrigerator unless it will be used in an explosion-proof area. A flammable liquids storage refrigerator will suffice.</p>	<ul style="list-style-type: none"> CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Be aware and comply.		
<p>61. All refrigerators and freezers used to store samples or chemicals should be labeled with a "No Food Storage" sign.</p> <p>All lab refrigerators should be marked "No Food Storage" as a reminder about the prohibition of storage and use of food in a chemical work area.</p>	<ul style="list-style-type: none"> CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Be aware and comply.		
<p>62. Hazardous chemicals that are packaged in glass containers must be transported in bottle carriers.</p> <p>Bottle carriers are useful for preventing spillage and breakage of containers in transport through a doorway or other obstructed area. Rubber or plastic containers with handles are preferred. You may also transport these containers in their original packing material.</p>	<ul style="list-style-type: none"> CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories American Chemical Society (ACS) NC State Policy 	Be aware and comply.		
<p>63. Store hazardous liquid chemicals below eye level.</p> <p>Hazardous liquids should be stored below eye level for ease of handling, spill prevention and to minimize the risk of leaking chemical contact with the eyes.</p>	<ul style="list-style-type: none"> CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Maintain appropriate storage practices.		
<p>64. Maintain an ongoing inventory of hazardous chemicals (through your Safety Plans).</p> <p>It is important to maintain a current inventory of all chemicals present in the work area. These listings are referenced by emergency response organizations during incidents and also serve as a record of materials used in the lab. Chemical inventories require an annual update. Also, updates are necessary whenever a new highly hazardous chemical is ordered (Target chemicals), hazardous gases are purchased for the first time, and a major change in volume of purchased hazardous material.</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 40 CFR 355 et al Emergency Planning and Community Right-to-Know 	<p>Maintain a current inventory in your safety plan.</p> <p>Areas not covered by a safety plan must also maintain a current inventory.</p>		
H. WASTE DISPOSAL				
<p>65. Arrange for disposal of chemical and all other wastes or unwanted products through the EH & S.</p> <p>With few exceptions, chemical and radioactive wastes must be disposed of through EH&S's hazardous waste program. Subject wastes include chemicals, contaminated debris, and hazardous articles such as fluorescent tubes and rechargeable batteries. The program appears at www.ncsu.edu/ehs/waste.htm To register as a waste generator and file waste forms, follow the "Waste Submission Form" link on the waste program site. For additional information, contact Rob Pecarina at 515-6863 or Robert_Pecarina@ncsu.edu</p>	<ul style="list-style-type: none"> NC State Policy NC Session Law 2010-180 – no lamps to landfills 	Be aware and comply.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>66. Wastes must be stored in compatible containers.</p> <p>Waste containers must be free of damage and leak resistant, able to be closed securely (e.g., no beakers, flasks, corks, or rubber stoppers), constructed of an appropriate/compatible material for the product collected (e.g., no glass containers for hydrofluoric acid), not overfilled (leave at least 10% free space for expansion of liquids), kept free of exterior contamination, and kept closed except when adding or removing material. Containers should be capped and sealed for storage or transport. Hazardous chemical waste shall be stored the same way that original containers are to be kept (e.g. flammable waste needs stored inside a flammable storage cabinet) For additional information, contact Rob Pecarina at 515-6863 or Robert_Pecarina@ncsu.edu</p>	<ul style="list-style-type: none"> • 29 CFR 1910.1200 Hazard communication • 29 CFR 1910.1450 Occupational exposure to hazardous chemicals in laboratories • EPA 40 CFR 262 Subpart C 	Be aware and comply.		
<p>67. Containment trays must be present in areas where waste containers are filled.</p> <p>Areas where wastes are placed in containers, or waste containers are stored, must have secondary containment. Suitable containment for less than 4-liter quantities is a shallow tray. For quantities up to 5 gallons (20 liters), a tray at least 1.5 inches deep may be suitable. Larger containers in laboratory settings (10-30-gallon drums) require secondary containment equivalent to about 10% of the drum's capacity. Containers in shops or other non-laboratory settings require 100% capacity of the largest container or 10% capacity of all containers, whichever is greater. For additional information, contact Rob Pecarina at 515-6863 or Robert_Pecarina@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.1200 Hazard communication • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Be aware and comply.		
<p>68. Accumulation of chemical wastes must be minimized and limited to the laboratory or work area.</p> <p>Filled waste containers should be promptly reported for disposal by filing on-line waste forms. The waste holding area must be limited to the work area where the material is used or an adjacent room under the control of the Principal Investigator responsible for the waste. With few exceptions, waste accumulation is limited to 55 gallons total for the area. Waste collections are conducted weekly to assist labs and shops in minimizing waste inventories. For additional information, contact Rob Pecarina at 515-6863 or Robert_Pecarina@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories • EPA 40 CFR 262 Subpart C 	Monitor waste accumulation throughout the year.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
I. Compressed Gases				
<p>69. All compressed gas cylinders must be ordered through Materials Support (key for communication of cylinder safety requirements, cylinder inventory, and safe delivery procedures).</p> <p>All compressed gas orders must be placed with Materials Support. Materials Support helps coordinate delivery through suppliers familiar with University requirements for delivery, receipt, and tracking. This also permits the cylinder to be placed on the University inventory (helps to reduce your chances of paying rental charges for forgotten cylinders), allows for proper review of key safety controls for hazardous gases, and allows for leak testing of high hazard gases at the EHSC prior to delivery. Forms for purchasing gas cylinders are located at http://www.fis.ncsu.edu/materialsmgmt/MaterialsSupport/Gas_CylinderMainPage.html Contact Harold Morton at 513-1422 or email Harold_Morton@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.101 Compressed gas • CFR1910 subpart M 	Place orders with Central Stores. Materials Support		
<p>70. All persons using hazardous gases should be familiar with the requirements of the Compressed Gas Safety section of the Health and Safety Manual.</p> <p>Compressed gas users should be aware that extensive information on this subject is available at http://www.ncsu.edu/ehs/www99/right/handsMan/compgas/comp_gas.html Contact Harold Morton at 513-1422 or email Harold_morton@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.101 Compressed gas • CFR1910 subpart M • CFR1910.1200 Hazard communication 	Initial and annual training.		
<p>71. All hazardous gas cylinders must be leak- checked at installation and again upon removal from service.</p> <p>Always leak check hazardous gases, as a minimum, during installation and before removing the cylinder from your work area. Additional leak testing procedures are required for high hazard gases (based on gas type, building location, etc) and are communicated when gases are ordered through Materials Support. For assistance contact Harold Morton at 513-1422 or email Harold_morton@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.101 Compressed gas • CFR1910 subpart M 	Follow appropriate procedures.		
<p>72. Gas cylinders must be secured in stands or with chains or straps and capped when not in use.</p> <p>Cylinders must be secured at all times with proper securing devices such as straps and clamps. The screw on cylinder caps must be in place at all times when a regulator is not connected to provide mechanical protection. Regulators must be removed and cylinder caps replaced prior to movement of compressed gas cylinders. (The torque on the valve assembly created by a cylinder falling and landing on the regulator assembly creates an increased risk of violent cylinder leakage). For assistance contact Harold Morton at 513-1422 or email Harold_morton@ncsu.edu</p>	<ul style="list-style-type: none"> • CFR1910.101 Compressed gas • CFR1910 subpart M 	Maintain safe storage practices.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>73. Use flow-limiting orifices on flammable, toxic, and corrosive gases.</p> <p>Flow limiting orifices are devices that are inserted into gas cylinder valves that dramatically limit the maximum rate of escape from the cylinder while still providing adequate flow for the process or experiment. These orifices are required for flammable, pyrophoric, toxic, and corrosive gases and come in various sizes. These devices are requested to be placed in cylinder valves at the time the gas is ordered through Materials Support.</p> <p>http://www7.acs.ncsu.edu/materialsmgmt/FileWriter/default.htm</p> <p>These are not required for acetylene, or for use with gases in welding, burning, or brazing. For assistance contact Harold Morton at 513-1422 or email Harold_morton@ncsu.edu</p>	<ul style="list-style-type: none"> CFR1910.101 Compressed gas CFR1910 subpart M 	Order orifice and cylinders through Central Stores.		
<p>74. Use pneumatic shutoff valves where necessary.</p> <p>Pneumatic shutoff valves are spring-loaded, air-operated valves which close when electrical power is lost. They are also used to automatically shut gas flow when exhaust ventilation is lost and can shut off gases remotely in the event of emergency. These valves are required to be used where highly toxic, toxic, corrosive, or pyrophoric gases are in use. They are not required for use on non-toxic, flammable gases used with analytical equipment if a flow restrictor is in place. They are not required for welding, burning, or brazing. . For assistance or review of your gas installation contact Harold Morton at 513-1422 or email Harold_morton@ncsu.edu</p>	<ul style="list-style-type: none"> CFR1910.101 Compressed gas CFR1910 subpart M 	Order shutoff valves if necessary.		
<p>75. Transferring products from one gas cylinder to another is prohibited.</p> <p>Please contact EH&S for further information if you feel the need for cylinder to cylinder transfer so that other options can be explored. . For assistance contact Harold Morton at 513-1422 or email Harold_morton@ncsu.edu</p>	<ul style="list-style-type: none"> Not illegal, but the EH & S requires prior approval 	Be aware and comply.		
J. Safety Showers and Eyewashes				
<p>76. Safety showers and eyewash stations are required wherever hazardous chemicals, specifically corrosive chemicals or gases are used They shall be installed in accessible locations that require no more than 10 seconds to reach.</p> <p>Areas where corrosive and other hazardous to eye/skin chemicals are used need to have ready access to ANSI Z358.1-approved type eyewashes and safety showers. . An eyewash or safety shower should be located within a maximum ten-second travel distance of the chemical use area. Access to an eyewash should not require passage through a door. . Access to a safety shower and eyewash shall not be obstructed. Specific OSHA regulations (such as the formaldehyde standard) also require eyewash stations immediately adjacent to the hazard. For more information contact Mahdi Fahim at 513-1282 or Mahdi_Fahim@ncsu.edu</p> <p>Helpful links: http://www.ncsu.edu/ehs/www99/right/handsMan/factsheet/Eyewash%20fact_1.pdf</p> http://www.ncsu.edu/ehs/www99/right/handsMan/factsheet/Safety Shower fact_1.pdf	<ul style="list-style-type: none"> CFR1910.151 Medical Services and First Aid NC State policy based on ANSI, Z358.1 Training incorporated into CFR1910.1200 and CFR1910.1450 EPA WPS (w/in .25 mile) 	Be aware and comply.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>77. Document weekly eyewash tests.</p> <p>Eyewash stations, including those installed within hallways, must be tested at least weekly by someone in the work area (allow water to flow until it is clear and ensure proper/sufficient flow from the eyewash heads). This testing should be documented on an eyewash test tag or form attached to the eyewash as a visible reminder for retesting. A log of eyewash testing is also acceptable. The test log must include the date the eyewash was tested and the initials of the person who performed the test.</p>	<ul style="list-style-type: none"> CFR1910.151 Medical Services and First Aid 	Be aware and comply.		
<p>78. Safety showers must be tested every 6-12 months by Facilities Operations. A tag should be attached to each safety shower indicating the most recent test date. Facilities Operations is responsible for periodic testing of safety showers.</p>	<ul style="list-style-type: none"> CFR1910.151 Medical Services and First Aid NC State policy based on ANSI, Z358.1 	Be aware and comply.		
K. Radiation Producing Equipment and Radioactive Materials				
<p>79. The Radiation Safety Committee and Radiation Safety must approve all uses of radiation producing devices and radioactive materials.</p> <p>Each proposed use of radiation must be described in a protocol that must be reviewed and approved by the Radiation Safety Committee and the Radiation Safety Officer (or his/her designee) http://www.ncsu.edu/ehs/radsafety.htm. For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> 15A NCAC North Carolina Regulations for Protection against Radiation NC State Radiation Safety Manual NC State Radioactive materials license 	Obtain approval prior to beginning work. Complete certification process before disposing of material.		
<p>80. All new employees, graduate students, and other lab staff must attend the appropriate training classes in order to use radioisotopes or radiation producing devices.</p> <p>All persons handling radioactive material, sources of ionizing radiation, or radiation producing devices are responsible for completing a worker registration form and for successfully completing applicable training courses, including refresher training. For more information: http://www.ncsu.edu/ehs/radiation/training.htm For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> 15A NCAC North Carolina Regulations for Protection against Radiation NC State Radiation Safety Manual NC State Radioactive materials license 	Initial training, then training every second year.		
<p>81. All radioisotope inventories must be kept current</p> <p>Each Principle Investigator is responsible for maintaining his/her own radioisotope inventory. http://www.ncsu.edu/ehs/radiation/forms/Rad %20Safe Manual_2005.pdf see Receipt, Inventory, Transfer section. For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> 15A NCAC North Carolina Regulations for Protection against Radiation NC State Radiation Safety Manual NC State Radioactive materials license 	Reviewed during quarterly lab inspection.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>82. All radiation producing devices and general licensed devices must have safety postings and labels from the Radiation Safety Division.</p> <p>All radiation producing equipment and general licensed devices must contain a label from the Radiation Safety Division. This is to assure this equipment is part of the radiation safety inventory, thereby helping assure the equipment receives the required periodic inspections. For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> • 15A NCAC North Carolina Regulations for Protection against Radiation • NC State Radiation Safety Manual • NC State Radioactive materials license 	Inspect devices for appropriate labels, signs and notices.		
<p>83. Radiation dosimetry badges must be worn routinely.</p> <p>If a radiation dosimetry badge has been issued to measure radiation exposure to particular radioactive materials or x-ray devices, these badges must be worn any time these materials/devices are used. For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> • 15A NCAC North Carolina Regulations for Protection against Radiation • NC State Radiation Safety Manual • NC State Radioactive materials license 	Be aware and comply.		
<p>84. Lab surveys must be conducted monthly during usage of RAM.</p> <p>If radioactive materials are used, the user must conduct a monthly contamination survey. The survey must be conducted one time in each calendar month. For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> • 15A NCAC North Carolina Regulations for Protection against Radiation • NC State Radiation Safety Manual • NC State Radioactive materials license 	Conduct monthly survey.		
<p>85. Work area(s) where radioactive materials are used must be clearly identified and labeled with signage and labeling tape.</p> <p>Signs, labels, and notices are required in areas where radioactive materials are used or stored or where radiation-producing equipment is located. Various types of signs, labels, and notices are required based on conditions. For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> • 15A NCAC North Carolina Regulations for Protection against Radiation • NC State Radiation Safety Manual • NC State Radioactive materials license 	Inspect work area for appropriate labels, signs and notices.		
L. Biological Hazards				
<p>86. All workers exposed to human blood, body fluids, and other potentially infectious material (including human cell lines) must work under the requirements set forth by their Exposure Control Plan for Bloodborne Pathogens.</p> <p>A model Exposure Control Plan for NC State is at http://www.ncsu.edu/ncsu/ehs/www99/left/bioSafe/BBP.htm</p> <p>For more information contact Darren Trembl at 515-6858 or Darren_Trembl@ncsu.edu</p>	<ul style="list-style-type: none"> • OSHA Bloodborne Pathogen Standard • CDC Universal Precautions • NC State Policy 	<ul style="list-style-type: none"> • Annually update Exposure Control Plan • Annual training • Hep B vaccination 		

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<p>87. Investigators must obtain approval from the Institutional Biosafety Committee (IBC) of the following biological materials prior to the procurement of the materials necessary to initiate the project:</p> <ul style="list-style-type: none"> • recombinant DNA in organisms; • creation of transgenic plants or animals; • human and other primate-derived substances (blood, body fluids, cell lines or tissues); • organisms and viruses infectious to humans, animals or plants (e.g. parasites, viruses, bacteria, fungi, prions, rickettsia); • biologically active agents (i.e. toxins, allergens, venoms) that may cause disease in other living organisms or cause significant impact to the environment or community. <p>The registration form is available at: http://www.ncsu.edu/ncsu/ehs/biosafety.htm</p> <p>For more information contact Darren Trembl at 515-6858 or Darren_Trembl@ncsu.edu</p>	<ul style="list-style-type: none"> • CDC Biosafety in Microbiological and Biomedical Laboratories • NIH Guidelines for rDNA • Select Agent Regulations • USDA/APHIS permits • Arthropod Containment Guidelines • OSHA BBP Standard • NC Biological Agents Registry Law • IBC 	Submit the Biological Use Authorization form to the University Biosafety Officer		
<p>88. For all work at Biosafety Level 2 and above, the BSL-2 checklist is completed and a biosafety manual is adopted.</p> <p>The university Biosafety Manual is available at http://www.ncsu.edu/ncsu/ehs/www99/left/bioSafe/index.pdf . The BSL-2 checklist is available at http://www.ncsu.edu/ncsu/ehs/www99/left/bioSafe/forms/bsl2_checklist.doc</p> <p>For more information contact Darren Trembl at 515-6858 or Darren_Trembl@ncsu.edu</p>	<ul style="list-style-type: none"> • CDC Biosafety in Microbiological and Biomedical Laboratories • NIH Guidelines for rDNA • Institutional Biosafety Committee 	Complete the checklist. Provide for availability of Lab Biosafety Manual to all workers.		
<p>89. All work conducted in conjunction with lab animals must be pre-approved by IACUC.</p> <p>All work with animals must have prior approval by the Institutional Animal Care and Use Committee (IACUC) before the experiment begins. For more information go to http://www.ncsu.edu/iacuc/forms.html.</p> <p><u>For more information</u> contact Judy Schledorn at 515-7507 or iacuc@ncsu.edu</p>	<ul style="list-style-type: none"> • IACUC • Animal Welfare Act 	Contact IACUC.		
<p>90. All work conducted using human subjects must be pre-approved by the Institutional Review Board (IRB) for research involving human subjects.</p> <p>Any research involving human subjects must be reviewed and approved by the Institutional Review Board (IRB). See the IRB website at http://www.ncsu.edu/sparcs/IRB/</p>	<ul style="list-style-type: none"> • CFR Protection of Human Subjects • IRB 	Contact IRB.		
<p>91. All international shipments must be reviewed to determine the need for an Export License.</p> <p>Complete the online Export License Determination request that may be found at http://www.ncsu.edu/sparcs/export/index.html.</p>	<ul style="list-style-type: none"> • Department of Commerce's Bureau of Industry and Security • NC State Policy 	Contact SPARCS		

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<p>92. All biological safety cabinets must be inspected annually.</p> <p>An inspection sticker is placed on each Biological safety cabinet at the time it is inspected that indicates the date the unit was inspected. Cabinets that are past due for inspection (more than 12 months) or that lack an inspection sticker entirely should be brought to the attention of EH & S:</p> <p>For more information contact Darren Trembl at 515-6858 or Darren_Trembl@ncsu.edu</p> <p>Additional information is available at:</p>	•			
M. Laser Hazards				
<p>93. All Class 3 and 4 laser applications must be reviewed by EH & S.</p> <p>The University laser safety officer and the laser owner must jointly review all Class 3b and 4 laser operations. This review helps assure that laser safety controls and procedures are adequate for the operation and are consistent with established laser safety standards. Check the manufacturers sticker to determine the hazard class for lasers whose rating is unsure. Contact Ken Kretchman 515-6860 Ken_Kretchman@ncsu.edu If you are not sure if the laser has been reviewed in its present location. http://www.ncsu.edu/ehs/www99/right/handsMan/lasers/laser.html</p>	• ANSI Z136.1	Be aware and comply.		
<p>94. Lab personnel and visitors must be provided the appropriate eye protection for the wavelength(s) present.</p> <p>Proper laser eye protection (in good condition) is required for Class 3b and 4 lasers (and maybe be required for some class 3R lasers if the beam is concentrated through viewing optics). This eye protection should be available for donning prior to entering the potential hazard area of the laser operation. Special care needs to be taken where multiple wavelengths are encountered. Contact Ken Kretchman 515-6860 Ken_Kretchman@ncsu.edu</p>	• ANSI Z136.1	Be aware and comply.		
<p>95. All laser users and all other who may be in an area that contains a laser must attend the appropriate level of laser safety training.</p> <p>Persons who work with or around class 3b or 4 lasers require laser safety training. The word "around" is intended to include persons who routinely work in the same space as the laser and need to understand work practices, the use of protective equipment or other procedures to avoid injury. Review the training section of the EH&S home page or contact Ken Kretchman 515-6860 Ken_Kretchman@ncsu.edu If training is needed. Supervisors of laser users should review their internal laser safety procedures (should be part of their safety plan) with all new employees prior to their starting work.</p>	• ANSI Z136.1	Initial and annual training. Covered in safety plan.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>96. All Class 3b and 4 lasers must be labeled with a 3 digit inventory number assigned by the EH & S.</p> <p>All Class 3b and 4 lasers must have an inventory sticker from EH&S on the laser. This sticker has a three-digit number and instructions to contact the laser safety officer if the laser is relocated, ownership transferred, or is to be discarded. Please contact Ken Kretchman at 515-6860 Ken_Kretchman@ncsu.edu If you have a laser that does not have an inventory sticker. This information is critical for keeping track of laser locations, owners, and training.</p>	<ul style="list-style-type: none"> ANSI Z136.1 	Request an inventory number if the laser in your area is not labeled, and part of the NC State laser inventory.		
N. SECURITY OF HAZARDOUS MATERIALS				
<p>97. Hazardous materials must be placed into a secured area immediately after receipt.</p> <p>For additional information, please contact Todd Becker at 515-2895 or Todd_Becker@ncsu.edu</p>	<ul style="list-style-type: none"> NC State Hazardous Materials Committee Recommendation NC State Hazardous Materials Transportation Security Plan 	Do not allow chemicals / biologicals to sit in an unsecured area, even temporarily.		
<p>98. Access to labs is controlled.</p> <p>Lab doors are locked when unattended. For additional information, please contact Todd Becker at 515-2895 or Todd_Becker@ncsu.edu</p>	<ul style="list-style-type: none"> NC State Hazardous Materials Committee Recommendation CDC / NIH – Biosafety in Microbiological and Biomedical Laboratories NC State Hazardous Materials Transportation Security Plan 	Lock Lab doors.		
<p>99. Access to high hazard materials inside labs is controlled.</p> <p>See guidelines at http://www.ncsu.edu/ncsu/ehs/www99/right/handsMan/worker/lab_security.htm</p> <p>For additional information, please contact Ken Kretchman at 515-6860 or ken_kretchman@ncsu.edu</p>	<ul style="list-style-type: none"> NC State Hazardous Materials and Radiation Safety Committees Recommendation CDC / NIH – Biosafety in Microbiological and Biomedical Laboratories NC State Radiation Safety Manual American Patriot Act 	Store poisons /select agents /radioactive materials under lock within lab.		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>100. Personnel authorized for entry into areas where high hazard chemicals/biologicals are stored are identified with badges.</p> <p>See guidelines at http://www2.ncsu.edu/ncsu/ehs/www99/right/handsMan/worker/lab_security.htm</p> <p>For additional information, please contact Ken Kretchman at 515-6860 or ken_kretchman@ncsu.edu</p>	<ul style="list-style-type: none"> NC State Hazardous Materials Committee Recommendation CDC / NIH – Biosafety in Microbiological and Biomedical Laboratories 	Wear ID Badges.		
<p>101. Use inventory control procedures for highly hazardous and radioactive materials.</p> <p>For additional information contact either Ken Kretchman at 515-6860 or ken_kretchman@ncsu.edu;</p> <p>or</p> <p>Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> NC State Hazardous Materials Committee Recommendation CDC / NIH – Biosafety in Microbiological and Biomedical Laboratories NC State Radiation Safety Manual and University Licenses 	Reconcile inventory for both receipt and disposal of highly hazardous materials.		
O. PESTICIDE SAFETY				
<p>102. Faculty and staff who supervise employees and students who work with agricultural pesticides must comply with the Worker Protection Standard.</p> <p>For an overview of who is covered by the Worker Protection Standard, visit the US EPA link http://www.epa.gov/agriculture/epa-735-b-05-002_frontwho.pdf. A quick reference guide to the WPS can be found at http://www.epa.gov/agriculture/epa-735-b-05-002_unit1.pdf. If you have additional questions about your specific activities, contact John Dalley, Structural Pest Control and Pesticides Division, NCDA&CS at John.Dalley@ncarg.gov or call 919-733-6100 ext. 297.</p>	<ul style="list-style-type: none"> 40 CFR part 170 (incorporated in NC general statutes as subchapter 9L Pesticide section http://reports.oah.state.nc.us/ncac/title%2002%20-%20agriculture%20and%20consumer%20services/chapter%2009%20-%20food%20and%20drug%20protection/subchapter%20I/02%20ncac%2009%201805.html) 	Be aware and comply		
<p>103. Faculty, staff and students who work in structural pest control must comply with the Structural Pest control Law of North Carolina.</p> <p>Individuals who apply pesticides under structural pest control (or supervising individuals who apply them) should be non-commercial certified applicators in at least the phase specific to their work. For information about certification and licensing to control structural pests, contact Mike Waldvogel at 919-515-8881 or Mike_Waldvogel@ncsu.edu.</p>	<ul style="list-style-type: none"> NC Administrative code Title 2 chapter 34 http://reports.oah.state.nc.us/ncac.asp?folderName=\Title%2002%20-%20Agriculture%20and%20Consumer%20Services\Chapter%2034%20-%20Structural%20Pest%20Control 	Be aware and comply		

NC STATE UNIVERSITY SUPERVISOR'S SAFETY SELF ASSESSMENT CHECKLIST	APPLICABLE STANDARD	ACTION FOR ITEM	COMMENT OR CORRECTIVE ACTION NEEDED	DATE COMPLETED
<p>104. Employees who use agricultural pesticides must maintain a valid public operator's pesticide license.</p> <p>Faculty, staff and students in the College of Agriculture and Life Sciences (CALs) who apply pesticides or who supervise staff and students who apply pesticides must have a valid NC public pesticide applicator license. For more information contact Wayne Buhler at Wayne_Buhler@ncsu.edu.</p>	<ul style="list-style-type: none"> Policy on Receiving, Storing, Transporting, Using (Testing), Disposal, and Collecting Pesticides by County Agricultural Extension Agents in North Carolina http://intra.ces.ncsu.edu/DeskRef/handbook/eah-522.htm 	Be aware and comply		
<p>105. Employees must be trained before handling or using experimental pesticides.</p> <p>Experimental pesticides are hazardous materials and therefore all new and transfer employees must be trained on the hazards of these chemicals by their supervisor during site specific hazard communication training.</p>	<ul style="list-style-type: none"> CFR1910.1200 Hazard communication CFR1910.1450 Occupational exposure to hazardous chemicals in laboratories 	Initial, general, hazard communication training is provided by EH & S. Labs with a safety plan, must provide initial and annual area-specific training. Employees exposed to chemicals but are not covered by a safety plan must receive initial hazard communication training		
<p>106. Pesticide labels must meet minimum standards</p> <p>Pesticide containers must clearly show the following information:</p> <ol style="list-style-type: none"> (1) Common chemical name; (2) Percentage of each active ingredient; (3) EPA registration number; (4) Signal word; (5) Use classification (restricted use or general use). 	<ul style="list-style-type: none"> 02 NCAC 09L .1902 http://reports.oah.state.nc.us/ncac/title%2002-%20agriculture%20and%20consumer%20services/chapter%2009-%20food%20and%20drug%20protection/subchapter%20I/02%20ncac%2009I%20.1902.html 	Be aware and comply		

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P. Chemical Security				
<p>107. The Department of Homeland Security (DHS) has issued <u>Chemical Facility Anti-Terrorism Standards</u> for any facility that manufactures, uses, stores, or distributes designated <u>chemicals</u> above a specified quantity.</p> <p>All laboratory and non-laboratory facilities shall report (in their safety plans) the total quantity of the designated chemicals, listed by DHS. Any major change in the quantity of these chemicals (increase or decrease) or a new start up shall be reported to EH&S within 30 days.</p> <p>For a complete list of these chemicals please see: http://www.dhs.gov/xprevprot/programs/gc_1185909570187.shtm</p> <p>For more information contact Amy Orders at 515-5208 or Amy_Orders@ncsu.edu.</p>	<ul style="list-style-type: none"> 6 CFR part 27 http://www.dhs.gov/xlibrary/assets/chemsec_appendixa-chemicalofinterestlist.pdf 	Be aware and comply		
Q. Controlled Substances				
<p>108. All controlled substance users require registering with the NC department of Health and Human services, drug control unit (NC-DCU) and then registering with the US Department of Justice, Drug Enforcement Administration (DEA).</p> <p>All employees who are allowed to work in an area where access to controlled substances clearly exists require filling out an employee screening form (filled out and kept in their departments).</p> <p>For more information regarding controlled substances schedule and applicable regulations please see NC State University Controlled Substances Program: http://www.ncsu.edu/ehs/www99/right/handsMan/Controlled_substances.pdf</p>	<ul style="list-style-type: none"> 21 CFR 1300-1308, 21 CFR 1301.90 and NC Controlled Substance Act, G.S. 90-101 through 90- 			
<p>109. Controlled substance registrants must fill-out NCSU Notification of Controlled Substance Registration Form (see NCSU controlled substances Program, appendix 4) and submit the form to EH&S (prior to registration and upon registration renewal.</p> <p>Contact your department and EH&S if you find controlled substances left behind from previous researches. For more information contact Mahdi Fahim: mahdi_fahim@ncsu.edu or Rob Pecarina: robert_pecarina@ncsu.edu</p>	<ul style="list-style-type: none"> NCSU Controlled Substances Program: http://www.ncsu.edu/ehs/www99/right/handsMan/Controlled_substances.pdf 			
R. Engineered Nanomaterial				

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<p>110. All employees working with engineered nanomaterial are required to obtain basic hazard awareness training and follow specific Standard Operating Procedures (SOPs).</p>		Review NCSU Safety Orientation Checklist http://www.ncsu.edu/ehs/nano/checklist.htm		
<p>S. Procurement of Hazardous Materials</p>				
<p>111. All hazardous materials shall be ordered through the University MarketPlace electronic procurement system</p> <p>All hazardous materials, including chemicals, compressed gases cryogenic liquids, biological agents, and radioactive material shall be ordered through the University MarketPlace electronic procurement system. If hazardous materials are not available through Marketplace, a purchase order shall be completed for the purchase. This requirement is necessary to achieve compliance with federal, state, and local regulations and to better assure faculty, staff, and student safety.</p>	<ul style="list-style-type: none"> Several Federal and state regulations 	http://www.ncsu.edu/policies/campus_environment/health_safety_welfare/REG04.20.9.php		

NC State University Supervisor's Safety Self Assessment Checklist**List of Acronyms**

§	North Carolina General Assembly Statutes
AALAC	Association for Assessment and Accreditation of Laboratory Animal Care
ACS	American Chemical Society
CDC	Centers for Disease Control
CFR	Code of Federal Regulations
DNA	Deoxyribonucleic Acid
DOI	North Carolina Department of Agriculture
EH & SC	Environmental Health and Safety Center
EPA	Exempt from the State of North Carolina Personnel Act
EPA	Environmental Protection Agency
HRF	Health Recommendation Form
HSM	Health Safety Manual
IACUC	Institutional Animal Care and Use Committee
IBC	Institutional Biosafety Committee
IRB	Institutional Review Board (for human subjects research)
MIT	Massachusetts Institute of Technology
MSDS	Material Safety Data Sheet
NC Star	North Carolina Department of Labor Program
NFPA	National Fire Protection Association
NIH	National Institute of Health
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
r-DNA	Recombinant Deoxyribonucleic Acid
SPA	Covered by the State (of North Carolina) Personnel Act

NC State University Safety Self Assessment Checklist

LIST OF REGULATORY SITES

1. United States Environmental Protection Agency

<http://www.epa.gov/lawsregs/>

2. Federal Occupational Safety and Health Administration - Regulations

http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=0

3. NC State University Safety and Health Manual

http://www.ncsu.edu/ehs/healthsafety_man.htm

4. North Carolina General Statutes

<http://www.ncleg.net/Statutes/toc-1.html>

5. NC General Statutes CHAPTER 95. Department of Labor and Labor Regulations.

<http://www.ncleg.net/statutes/statutes%5Fin%5Fhtml/chp0950.html>

6. NC State Biosafety Manual

<http://www.ncsu.edu/ncsu/ehs/www99/left/bioSafe/index.pdf> (left column)

7. NC State Radiation Safety

http://www.ncsu.edu/ehs/radiation/forms/Rad_Safe_Manual_2005.pdf (left column)

additional, useful links

8. Center for Disease Control (CDC):

<http://www.cdc.gov>

9. National Institute for Occupational Safety and Health (NIOSH)

<http://www.cdc.gov/NIOSH/>

10. Laboratory safety information

<http://www2.umdj.edu/eohssweb/aiha/administrative/design.htm>

11. Glove protection and selection

<http://www.ncsu.edu/ehs/www99/right/handsMan/worker/ppe/index.html>