2.13 LABORATORY INSPECTION PROTOCOL

2.13.1 Preparation

The following tasks are to be completed prior to the laboratory inspection:

- Research the principal investigator (PI) and the associated department to determine what is being performed in the laboratory; (This can be accomplished by searching the PI's name or the department on Google; reviewing the PI's research application with the Howard University Institutional Biosafety Committee (IBC); etc.)
- Read the previous laboratory inspection reports; look for reoccurring observations;
- Review the chemical inventory for each room associated with the PI (Are there any highly hazardous chemicals? Refer to the Highly Hazardous Chemical SOP; (section 2.10 provides more information)
- Verify that the chemical inventory was reviewed and updated in the past year;
- Review hazardous waste work orders associated with the PI;
- Review the Evacuation Plan for the laboratory and/or office area(s), confirm they are correct and were submitted in the last year;
- Contact PI/Laboratory Manager/Safety Contact to schedule the laboratory inspection; and
- Provide PI/Laboratory Manager/Safety Contact a copy of the laboratory inspection form for their review and use.

2.13.2 Inspection

2.13.2.1General Inspection

With laboratory contact, the inspector should:

- Introduce himself/herself with a brief description of his/her role within the EH&S Office and his/her experience.
- Provide a description of the laboratory inspection process.
- Compare the NFPA 704 signage with the chemical inventory.
- Confirm that the NFPA 704 sign is current and correct.
- Tour laboratory areas associated with the PI/Laboratory Manager/Safety Contact (laboratory bench top areas, storage areas, and common areas [i.e., equipment halls]).

NOTE: The PI/Laboratory Manager/Safety Contact can either stay with the inspector or leave at this point. It is up to the PI/Laboratory Manager/Safety Contact whether or not s/he wants to stay or not. However, it is preferred that the PI/Laboratory Manager/Safety Contact stay so that s/he witnesses the entire inspection.

2.13.2.2 Detailed Inspection

With or without PI/Laboratory Manager/Safety Contact, the inspector should:

- Use laboratory inspection form to determine compliance with applicable regulations and best management practices.
- Inspect work practices in the laboratory.
  - Are researchers wearing PPE such as laboratory coats, gloves and/or face/eye protection (as appropriate) when working with hazardous chemicals?
  - Have someone show where the PPE is stored and how they dispose of contaminated PPE.
  - Ensure all laboratory and administrative personnel have attended the appropriate EH&S training within the past year.
  - Ensure equipment (e.g., freezers) and building (e.g.,HVAC system; chemical fume hoods, etc.) is functioning properly.
- Conduct a thorough inspection of the Chemical Storage Areas within the laboratory for proper storage. This means look at every bottle of hazardous chemical. Here are some guidelines:
  - Ensure flammables are stored in rated cabinets
  - Ensure acids are stored in acid rated cabinets
  - Ensure bases are stored in base rated cabinets
  - Check to see if peroxide formers are stored properly; appear in good condition; are not past or approaching expiration date
  - Ensure water reactive chemicals are stored together and away from moisture
  - Ensure all chemicals that pose significant risk have an SOP outlining their safe usage
  - Ensure chemicals are stored by chemical compatibility not alphabetically
  - Ensure containers of hazardous chemicals are labeled with the name of the chemical and the hazard associated with it. Also, recommend that all containers be labeled with their contents for emergency response assistance.

- Open every drawer, freezer, refrigerator, cabinet, etc. to ensure no chemicals are being improperly stored in the laboratory area.

2.13.2.3 Document and Inspection Review

After detailed inspection, meet the PI/Laboratory Manager/Safety Contact, to review the laboratory inspection and EH&S practices associated with his/her laboratory. Use the inspection form as a guide for this phase of the inspection:

- Does the laboratory know how to obtain regulatory documents (i.e., EH&S/Safety Manual; Chemical Hygiene Plan)?
- Who are the appropriate contacts for incidents and emergencies?
- What are the appropriate procedures for incidents and emergencies?
- Discuss the observations associated with the inspection using regulatory or scientific information to support observation.
- Provide ways to improve compliance with EH&S.
- Answer any questions; if you are unsure of the answer, indicate that you need to research the item and you will follow-up with a phone call with the supporting information.
- Inform them that the inspection report will be sent to Laboratory Manager/Safety Contact and the PI via e-mail for their use and review, indicating any corrective measures to be completed in 30 days
- Another inspection will be conducted after the inspection report is submitted to the EH&S Office to confirm that the observations have been corrected by the laboratory.

2.13.3 Follow-Up

- Respond via phone with any information requested during the inspection. Document conversation in a log book.
- Enter information into the inspection database.
- Have another EH&S staff member proof read the inspection report before generating it.
- Generate inspection report in a pdf format.
- Submit inspection report to PI/Laboratory Manager/Safety Contact.

- If the inspection report is not submitted back to the EH&S Office within one month, contact the PI/Laboratory Manager/Safety Contact to determine the status of the inspection report observations.

2.14 RECORD KEEPING

It is important to maintain a complete record of EH&S related matters including training records, hazard evaluations, inspection results, incident reports, hazardous waste manifests, etc. In the event that a regulatory agency inspects, these records may need to be available to produce upon request by the inspector. Ensure that record keeping is in compliance with all applicable regulations pertaining to the laboratory as stated in Section 2.2.