Narration:

Welcome to our “Laboratory Inspections” tutorial. This tutorial is intended to explain the kinds of inspections that laboratories are expected to undergo, in addition to biosafety-specific laboratory inspections.

Links:
Types of Lab Inspections

- Workplace Inspections – by JHSC
- Workplace Inspections – by supervisor per RMM302
- Biosafety audit by the - RCA
- Health physics inspections
- Animal audit – AREB
- Any regulator who has powers of inspection under any regulation

Narration:

Types of Lab Inspections.

Under the Occupational Health and Safety Act, all physical spaces are required to undergo a workplace inspection conducted by the local Joint Health and Safety Committee once per year. Under McMaster policy RMM302, each supervisor is also expected to inspect their workspaces once every quarter. Under the Human Pathogens and Toxins regulations and McMaster policy RMM600, each biohazard laboratory is inspected to ensure compliance with the applicable standards. These biosafety-specific inspections or audits are carried out by the Research Compliance Auditor. Your workspaces may also undergo inspections related to use of radioactive materials, use of animals or by any government regulator who has powers of inspection under any regulation.

Links:

RMM302 Safety Audits and Inspections
http://www.workingatmcmaster.ca/med/document/RMM-302-Safety-Audits-and-
Workplace Inspections carried out by the local Joint Health and Safety Committee.

Each type of inspection ends with a report outlining issues that require correction. For a workplace inspection carried out by the local joint health and safety committee, a copy of this report is sent to the supervisor or area manager. The JHSC expects that the supervisor or area manager will ensure that all issues are corrected. In most cases a response to the report is also required within a defined time frame, usually thirty days. If there are issues with implementing corrective actions, contact your supervisor, your chair or manager or dean or director for your area. All reported issues must be addressed.

Links:

http://www.workingatmcmaster.ca/eohss/prevention/jhsc/
https://fhs.mcmaster.ca/safetyoffice/johs_committees.html
Workplace Inspections by Supervisor

- CBS requires regular visual inspections and their documentation
- This workplace inspection would satisfy this criteria
- Inspection forms from EOHSS or FHS Safety
- Supervisor can delegate the inspection to a worker, but must be accountable
- Corrective actions must be implemented and documented.

Narration:

Workplace inspections by Supervisor.

The Canadian Biosafety Standard requires that each containment zone be visually inspected regularly and that these visual inspections be documented. Since our RMMs already require a workplace inspection by the supervisor at least quarterly, this inspection will also satisfy the CBS criteria. Inspection forms for this purpose may be downloaded from EOHSS or the FHS Safety Office websites. The supervisor can delegate the inspection to a worker, however the supervisor is accountable for the accuracy of the inspection. All corrective actions must be implemented and documented.

Links:

FHS Safety Office Forms and Records
http://fhs.mcmaster.ca/safetyoffice/forms_and_records.html
EOHSS Inspection Forms
Narration:

Biosafety Audits.

Biosafety laboratory inspections are referred to as biosafety audits. They are conducted by the Research Compliance Auditor, under strictly defined standards, which include but are not limited to:

• Canadian Biosafety Standard
• Containment Standards for Facilities Handling Plant Pests
• Containment Standards for Facilities Handling Aquatic Animal Pathogens

• Insects / invertebrates, soil, plants, seeds
• Genetically modified organisms

It is important to understand that these requirements extend beyond the use of bacteria, fungi, toxins, prions and viruses. There may be extra requirements for those laboratories handling insects or other invertebrates, soil, plants, seeds or genetically modified organisms (microorganisms and higher animals). These laboratories are evaluated on a case by case basis against all applicable government regulations and organizational policies.

Links to all of these standards can be found on the Biosafety Audit Website.
Links:

Biosafety Audit Website https://biosafety.mcmaster.ca/biosafety_audits.htm
Narration:

Biosafety Audit Checklist.

The biosafety audit information is posted on the biosafety website. There are two documents to download – One is a ‘combined set of criteria’ and one is a ‘summary checklist’. It is strongly recommended that the combined set of criteria document be reviewed within the laboratory as it lists the recommendations for implementation of each criterion. It is meant to act as a resource for all biohazard laboratories, and includes a detailed description of how the criteria can be implemented locally. The checklist collates requirements from a number of provincial, federal and international standards. It is recommended that this document be reviewed on a regular basis, since the implementation sections are updated frequently to give better and more detailed recommendations.

Links:

Biosafety Audit Website https://biosafety.mcmaster.ca/biosafety_audits.htm
Narration:

Biosafety Audit Schedule.

The biohazard laboratories are audited on a defined schedule. Level 1 laboratories are audited once every three years. Level 2 and 2 enhanced laboratories are audited once every two years. The Level 3 laboratory follows a separate criteria set and is directly managed by the McMaster Biosafety Office. Each audit is scheduled with the supervisor and each audit requires a laboratory member to be present. The information is sent beforehand to ensure that the expectations are understood.

Links:
Narration:

Biosafety Audit Procedure.

Each biosafety audit takes approximately two hours to complete. Deficiencies found during the audit are corrected as much as possible with help from the auditor, however they are still noted on the report. The report is standardized and a request to review the report on the BUP portal is sent to the PI. The PI acknowledges the report and asserts that deficiencies will be fixed. The execution of the corrective actions are left to the supervisor to manage, there is no re-audit unless the deficiencies are severe.

Links:
**Biosafety Audits Management**

- Multiple audit reports
- Audit ‘complete’ when all rooms on BUP, excluding CAF/AF rooms have been audited.
- Approximately 500 biohazard locations that require auditing
- Time and resources
- Multiple sites

**Narration:**

Biosafety Audits Management.

Each supervisor may have multiple rooms. Auditing for that supervisor is considered complete when all the rooms have been audited. Animal housing rooms within animal facilities will be audited under the University Veterinarian’s BUP. Since there are approximately 500 biohazard locations that need to be audited which are spread over campus and the hospitals within the city, audits of any one supervisor’s laboratory may occur over a number of days or weeks. All efforts are made to audit a complete set of rooms in a short period of time. In some cases the audit may only review a portion of a room.

**Links:**
Preparing for an Audit (Worker)

- Read through the checklist
- Have the referenced standards handy on the computer
- Ensure all training and training records are up to date
- Ensure all SOPs have been reviewed
- Download and edit new SOPs if applicable
- Reduce unnecessary items and cardboard as much as possible
- Ensure all local contact information on doors is up to date

Narration:

Preparing for an Audit – Worker.

To prepare for an audit, it is recommended to read through the checklist and have all the referenced standards bookmarked on the computer for easy access. All training records should be up to date, all SOPs should be reviewed and additional SOPs should be downloaded or created if necessary. Please visit the biosafety SOPs website for available, editable SOPs. It is important to remove as much clutter and as much cardboard from all lab locations, especially coldrooms, as possible. Ensure all local contact information is on every lab door.

Links:

Biosafety SOPs Website https://biosafety.mcmaster.ca/biosafety_SOPs.htm
Preparing for an Audit (Supervisor)

- Read through checklist
- Delegate a self-inspection against the checklist to a worker
- Review all RMMs and select what is applicable
- Review training matrix and select what is applicable
- Instruct workers to update training
- Instruct competent staff to ensure proficiencies on SOPs

Narration:

Preparing for an Audit – Supervisor

It is recommended that the supervisor read through the checklist and delegate a self-inspection against the checklist to a worker. The supervisor should review and download all applicable RMMs so they are available in the lab’s safety documentation. The supervisor should review the training matrix and ensure all workers have the appropriate training and training updates. The supervisor should instruct competent staff to ensure workers are proficient in the tasks they are undertaking.

Links:

RMM Website http://www.workingatmcmaster.ca/rmm
RMM100 Health and Safety Training Program
Audit Results

- Supervisor is notified via email that the audit report is ready on the BUP portal.
- Results are also reviewed by the biosafety committee monthly and trends examined annually.

Narration:

Audit Results.

Audit results are recorded in a database and the supervisor is notified via email that the audit report is ready for viewing on the BUP portal. Results are also reviewed by the Presidential Biosafety Advisory Committee monthly. Trends in audit deficiencies are also reviewed by the Committee annually to assist with a compliance implementation plan for subsequent years.

Links:

RMM Website http://www.workingatmcmaster.ca/rmm
RMM100 Health and Safety Training Program
Narration:

Audit Response.

It is expected that the audit report will be acknowledged within 30 days. The supervisor asserts three statements on the audit form:

• I have read and understood the deficiencies noted.
• I understand that I can access and print a full report which includes additional reference material (standards, recommendations, links to resource materials, contact information) from the BUP Portal >>> Lab Audits section.
• I will address the deficiencies which for which I am responsible in a timely manner and will contact my departmental chair or the biosafety office should I require assistance.

• Implementation of the corrective actions left are for the Supervisor to manage
• Subsequent audits will focus on these deficiencies

Links:
RMM Website http://www.workingatmcmaster.ca/rmm
RMM100 Health and Safety Training Program
Narration:

In summary, biosafety audits are conducted on a regular schedule. Audit checklists are provided with very complete and helpful information. A response is expected within 30 days. All fixes are left with the Supervisor to manage. SOPs and training are always the most-cited deficiencies therefore it is necessary to prepare accordingly.

Links:
Narration:
Thank you for your participation.

Links:
McMaster Biosafety Website https://biosafety.mcmaster.ca