# Checklist for CL3 Laboratory Safety Audits

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| School |  |
| CL 3 Laboratories and facilities |  |
| Locations |  |
| Assessors |  |
| Dates |  |

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| Type of CL 3 laboratory | Yes | No | N/A |
| Is it a full CL 3 laboratory. |  |  |  |
| Is it a derogated CL 3 laboratory. |  |  |  |

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| Safety folder, Code of Practice (CoP) and standard operating procedures (SOP) | Yes | No | N/A |
| Is there a CL 3 laboratory safety folder with safety management records and documents, and is it securely stored on the School’s section of the University’s protected computer system. |  |  |  |
| Is there a CL 3 laboratory safety folder in the lab itself, with relevant documents that is accessible to all workers. |  |  |  |
| Is there a CL 3 Code of Practice (CoP) and has it been reviewed in the last year. |  |  |  |
| Is there a set of standard operating procedures (SOP) for routine, non-routine and emergency procedures. |  |  |  |
| Is there a set of standard operating procedures (SOP) for routine, non-routine and emergency procedures. |  |  |  |
| Is there a Biosecurity plan for Schedule 5 designated pathogens and toxins. |  |  |  |
| Is there a Transport security plan for Schedule 5 designated pathogens and toxins or other high consequence dangerous goods. |  |  |  |
| Are there general, COSHH, BA and GM risk assessments, safety data sheets, notifications and licences. |  |  |  |
| Is there an appointed CL 3 lab manager. |  |  |  |
| Is there a list of authorised persons. |  |  |  |
| Are there individual HG 3 pathogen exposure records as required under COSHH (eg Held in CHP System). |  |  |  |
| Are there written records of safety systems and arrangements, procedures, maintenance, validations and training. |  |  |  |
| Are there specific checklists used to carry out and record the various checks on the laboratory, equipment and activities. |  |  |  |

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| Information, instruction, training and supervision | Yes | No | N/A |
| Are the CL 3 CoP, risk assessments and SOPs available to all workers and in the CL 3 lab. |  |  |  |
| Is there a formal process for training and assessment of competence of all workers. |  |  |  |
| Are there training records and checklist for this assessment of competence for workers. |  |  |  |
| Has the CL 3 lab manager done a formal external training course on the management of CL 3 laboratories (eg HSE or UKHSA CL3 training courses or other external course). |  |  |  |
| Has the CL 3 lab manager received local internal training courses (eg BTI BSP training course or other internal course). |  |  |  |
| Has the CL 3 lab manager received local practical training from other CL 3 lab managers in the School or in other Schools (eg shadowing an experienced CL 3 lab manager) where required. |  |  |  |
| Do all workers receive CL 3 inductions. |  |  |  |
| Is there a system in place to control out of hours work and lone working. |  |  |  |
| Are the emergency instructions and key contacts on display. |  |  |  |

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| Laboratory and equipment | Yes | No | N/A |
| Are CL3 laboratories secure and separated from other work activities in dedicated rooms in the building. |  |  |  |
| Is a ‘Biological hazard’ sign displayed at entrance. |  |  |  |
| Is an ‘Authorised personnel only’ sign displayed at entrance. |  |  |  |
| Is there a ‘Containment level 3 laboratory’ sign displayed at entrance. |  |  |  |
| Are any other necessary signs displayed at entrance. |  |  |  |
| Is access to the CL 3 laboratories restricted to authorised persons only. |  |  |  |
| Do the doors have appropriate access controls using suitable means, so they are closed and secure at all times (eg lock and key, swipe card, digital lock or a combination). |  |  |  |
| Are there safety signs displayed on equipment such as chemical hazards, radiation hazards, flammables and gas cylinders. |  |  |  |
| Is the CL 3 laboratory maintained at an air pressure negative to atmosphere with the input air and extract air filtered using high efficiency particulate absorption (HEPA) or equivalent. |  |  |  |
| Are the input and output air supplies interlocked to prevent positive pressurisation of the laboratory if something goes wrong with the ventilation systems. |  |  |  |
| Is there an observation window and if needed mirrors, or suitable alternative (eg CCTV) present so that occupants can be seen. |  |  |  |
| Does the laboratory contain its own equipment where required. (eg MSC, isolators, incubators, centrifuges, autoclaves, fixed gas installations, portable gas equipment, hotplates, PCR machines etc). |  |  |  |
| Are the floor, walls and furniture surfaces impervious to water and easy to clean. |  |  |  |
| Are the surfaces designed to be resistant to acids, alkalis, solvents and disinfectants. |  |  |  |
| Are there microbiological safety cabinets (MSC), isolators or other suitable containment for handling materials where there is the risk of infectious or hazardous aerosols. |  |  |  |
| Is there equipment for safe storage of biological materials. |  |  |  |
| Are there disinfection equipment and methods. |  |  |  |
| Does CL 3 laboratory suite contain an autoclave. |  |  |  |
| Are the autoclaves located outside the suite where there is an approved derogation and regulatory consent. |  |  |  |
| Is there a validated method of inactivation of waste in contaminated materials in effluents from sinks and showers where required. |  |  |  |
| Are there vector controls (eg rodents and insects) where required. |  |  |  |
| Is there access to an incinerator for disposal of infected animal carcases where required. |  |  |  |
| Is the laboratory sealable to permit fumigation with specified routine and emergency fumigation procedures required. |  |  |  |
| Is there a phone provided for ordinary communications as well as for calling for internal assistance or the emergency services if needed. |  |  |  |
| Is there a computer linked to the internet to minimise the use of paperwork and pens and reduce the need to take them in and out of the laboratory. |  |  |  |
| Are there suitable means of detection and warning of hazards and emergencies (eg fire detection/alarms, gas monitors/alarms etc). |  |  |  |
| Is there provision of personal protective equipment (PPE) and gloves. |  |  |  |
| Is lone working avoided and are there controls such as buddy systems in the building, supervision, active monitoring or the use of lone worker monitor/alarms where needed. |  |  |  |
| Is the laboratory exhaust ventilation through the MSC and its HEPA filters only. |  |  |  |
| Is the laboratory exhaust ventilation through the MSC as well as separate room HEPA filtered exhaust system. |  |  |  |
| Are there any other types of LEV equipment in the lab (eg FC, isolators). |  |  |  |
| Is unnecessary packaging kept to a minimum in the lab. |  |  |  |
| Is there good housekeeping in the laboratory and associated facilities. |  |  |  |
| Are floors clean, sealed and in good condition |  |  |  |
| Are worktops intact and easily cleaned. |  |  |  |
| Is lighting adequate and in working order. |  |  |  |
| Are heavy items stored on/in low shelves or cupboards. |  |  |  |
| Are all chemicals clearly labelled, including hazard symbols where appropriate. |  |  |  |
| Are flammable reagents and solvents etc. stored in suitable closed vessels, within fire resistant cupboards, cabinets or bins containing spill trays. |  |  |  |
| Are bottles containing strong acids or strong alkalis stored on spill trays, and in hazardous chemical storage cabinets where needed. |  |  |  |
| Are there properly labelled, sharps disposal containers. |  |  |  |
| Are storage areas where potentially infective and/or toxic materials are kept labelled accordingly (eg rooms, cupboards, refrigerators, freezers etc). |  |  |  |
| Is all portable electrical equipment PAT tested and labelled with date. |  |  |  |
| Do all centrifuges have interlocked lids. |  |  |  |
| Do centrifuges have suitably sealed buckets or trays for secondary containment. |  |  |  |
| Are all pressurised gas cylinders secured by restraining chains, bench clamps or similar where needed. |  |  |  |
| Are gas cylinders sited away from doors or escape routes. |  |  |  |
| Are there adequate washing facilities, with soap and towels. |  |  |  |
| Is there a work sink(s). |  |  |  |
| Is there a suitable handwash sink(s). |  |  |  |
| Do the handwash sinks have a dedicated paper towel dispenser. |  |  |  |
| Do the handwash sinks have a dedicated soap dispenser. |  |  |  |
| Do the handwash sinks have an emergency wash hose. |  |  |  |
| Do the handwash sinks have taps with long handles or automatic ‘no touch’ (eg light sensor controlled) taps. |  |  |  |
| Are there separate lab paper towel dispensers for lab work. |  |  |  |
| Is there provision for the secure storage of outdoor clothing outwith this area, or in secure cupboards/lockers within the area as appropriate to prevent contamination. |  |  |  |
| Are there adequate numbers of lab coat hooks. |  |  |  |
| Is personal protective equipment available and in use (eg lab coats, gowns, eye protection, gloves, respirators etc). |  |  |  |
| Is the PPE properly stored, regularly inspected, cleaned and maintained. |  |  |  |
| Are sharps resistant gloves in lab. |  |  |  |
| Is the protective equipment stored where it cannot be contaminated by hazardous substances, and separate from and where it will not contaminate outdoor clothing. |  |  |  |
| Are there waste management and disposal arrangements. |  |  |  |
| Are there arrangements for disinfection of waste materials. |  |  |  |
| Are there arrangements for autoclaving of waste materials. |  |  |  |
| Are there arrangements for the safe storage of waste. |  |  |  |

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| 1. **Maintenance, examination, testing and validations** | **Yes** | **No** | **N/A** |
| Is validation of laboratory sealability to prove the integrity of the structure to contain fumigants carried out at least annually (or more frequently if required). |  |  |  |
| Does the validation method include a range of methods including visual inspection, smoke pencil tests, and ‘smoke’ or pressure test of the lab. |  |  |  |
| Is a pressure test of the laboratory carried out at any commissioning and thereafter at least every five years (or more frequently if required). |  |  |  |
| Is there any evidence of damage, leaks or dust trails in lab structure. |  |  |  |
| Is fumigation used for disinfection and decontamination of laboratory. |  |  |  |
| Are there SOP for routine and emergency fumigation of the laboratory. |  |  |  |
| Has the routine fumigation method(s) been validated for the laboratory (at least once every 5 years or more frequently if required). |  |  |  |
| Has the emergency fumigation method(s) been validated for the laboratory (at least once every 5 years or more frequently if required). |  |  |  |
| Is fumigation used for disinfection and decontamination of MSCs, isolators or other equipment. |  |  |  |
| Are there SOP for routine and emergency fumigation of the MSC, isolators or other equipment etc. |  |  |  |
| Are MSC given a thorough examination and test including a KI test at least every six months (or more frequently if required). |  |  |  |
| Are isolators given a thorough examination and test including a pressure test at least every six months (or more frequently if required). |  |  |  |
| Are MSC and isolators fumigated before they have maintenance, examination and testing. |  |  |  |
| Are any room HEPA filters maintained and tested every six months or at least annually. |  |  |  |
| Has the other LEV equipment had a maintenance, examination and testing done at least every six months (or more frequently if required). |  |  |  |
| Are the airflows of MSC tested regularly with anemometers at least once a month. |  |  |  |
| Are the anemometers serviced annually to ensure correct calibration. |  |  |  |
| Does each autoclave have a written scheme of examination (WSE). |  |  |  |
| Is maintenance, examination and testing carried out at least annually under the requirements of Pressure Systems Safety Regulations (PSSR) and the Written Scheme of Examination (WSE). |  |  |  |
| Are autoclaves given a full validation of waste inactivation at least every six months (or more frequently if required). |  |  |  |
| Is there monitoring of waste inactivation carried out for every waste inactivation run of an autoclave (eg electronic, data logger, print out, or indicators). |  |  |  |
| Are there maintenance and service records for equipment. |  |  |  |
| Are there validation and test reports and certificates for the laboratory and equipment. |  |  |  |

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| 1. **Emergency plans and procedures** | **Yes** | **No** | **N/A** |
| Is there an emergency plan where one is required. |  |  |  |
| Are there emergency procedures. |  |  |  |
| Are there emergency procedures for personal exposure events. |  |  |  |
| Are there emergency procedures for spillages. |  |  |  |
| Are there any other safety critical emergency procedures. |  |  |  |
| Is the emergency contact list on display inside and outside the lab. |  |  |  |
| Is there equipment for dealing with emergencies inside the lab and if needed also outside the lab. |  |  |  |
| Are there spill kits available to deal with spills of hazardous materials such as biological, chemical or radiological substances. |  |  |  |
| Is suitable PPE, such as ‘Tyvek’ type disposable suits, gloves, RPE etc, available to protect personnel in the event of control measures failing or to deal with a spillage. |  |  |  |
| Is there a first aid kit and eye wash bottles available in the lab. |  |  |  |
| Are trained first aiders available. |  |  |  |
| Is there sufficient first aid notices (green on white) informing staff of how and where to gain first aid help. |  |  |  |
| Is there relevant fire fighting equipment readily available. |  |  |  |
| Are personnel working in this area familiar with the location of this equipment. |  |  |  |
| Are there sufficient fire action notices (white on blue) to inform personnel of the action to take in the event of fire. |  |  |  |
| Are there clear emergency instructions for dealing with relevant emergencies (eg personnel exposure or spillages etc) on display where relevant in the labs and facilities. |  |  |  |
| Are workers trained in carrying out the emergency procedures. |  |  |  |
| Are practical drills of key emergency procedures carried out at least annually. |  |  |  |

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| Monitoring and auditing | Yes | No | N/A |
| Does the School safety adviser / Biological safety adviser regularly monitor the CL 3 laboratories to periodically check the state of the safety arrangements and provide ongoing support and advice to the CL 3 lab manager. |  |  |  |
| Are there two full audits of each CL3 laboratory and related facilities carried out every year at approximately six months intervals as the minimum standard(One joint BSU & School audit and one School audit). |  |  |  |
| Are specific CL3 laboratory inspection checklists used as part of the audits. |  |  |  |
| Are there specific CL3 lab specific checklists used to monitor laboratory, equipment, maintenance, training, drills etc. |  |  |  |
| Are there auditing and inspection reports and action plans. |  |  |  |

## Further information and guidance

## This CL 3 laboratory audit checklist is a general guide and is not exhaustive but it can be modified by Schools to use for audits and inspections. Please contact your School Safety Adviser or School Biological Safety Adviser if you need advice on the auditing of containment level 3 laboratories and facilities. Further information and guidance on the Biosafety Unit (BSU) website.

## Document version

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| **Version number** | **Summary of change** | **Date and by whom** |
| **V1.0** | **New document** | **26/08/2023 by P. Walsh** |
| **V1.1** | **Revision to update and consolidate questions** | **13/06/2024 P. Walsh** |

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