

TITLE:	IBC19- Laboratory Commissioning - ABSL-2 and BSL-2
OVERVIEW:	Prior to occupation, all laboratories designed as biosafety level 2 (BSL-2) and animal BSL-2 (ABSL-2) must undergo an initial commissioning process. This process is part of the initial certification process as an orderly advancement from state of static completion to a functioning facility in accordance with the design intent.
APPLIES TO:	All newly constructed or renovated laboratories that will be used to contain risk group 2 biohazardous agents. (For BSL-3 and ABSL-3 laboratories, refer to policy #UNMC-IBC20, Laboratory Commissioning BSL-3)
DEFINITION(S):	<p><i>Certification</i> - verification that the facility meets requirements for design and use.</p> <p><i>BSL-2 containment</i> - suitable for work involving agents of moderate potential hazard to personnel and the environment.</p> <p><i>ABSL-2 containment</i> - practices suitable for work with animals infected with risk group 2 agents.</p> <p><i>Risk Group 2 (RG-2) agent</i> - biological agent associated with disease which is rarely serious and for which preventative or therapeutic interventions are often available [moderate individual and low community risk].</p>
PROCEDURES:	<p>The commissioning process for the initial certification of a newly constructed or renovated laboratory is performed to address the <i>facility design</i>.</p> <p>All laboratories must also undergo an initial biosafety laboratory inspection to address <i>standard practices</i> utilized, <i>safety</i> issues, and any <i>special practices</i> needed in the function of the laboratory.</p> <p>For BSL-2 laboratory, the Principal Investigator is responsible to complete the checklist (refer to <i>IBC19-Form 1</i> for checklist) prior to using the new laboratory and to submit the completed checklist to the Biosafety Officer.</p> <p>For ABSL-2 laboratory, Comparative Medicine personnel are responsible to complete the checklist prior to using the new laboratory and to submit the completed checklist to the Biosafety Officer.</p>

	<p>Facility design commissioning verifies that:</p> <ol style="list-style-type: none">1. Room integrity<ul style="list-style-type: none">-laboratory furniture is capable of supporting anticipated loading and uses.2. Biological Safety Cabinet certification<ul style="list-style-type: none">-a test certificate is available for each BSC indicating that the cabinet has passed certification requirements in accordance with NSF 49.-calibration and verification certificates of the equipment used to test the BSCs are on file with the University.-each BSC is labeled to indicate that it has been certified.-BSCs are located away from doors, from windows that can be opened, from heavily traveled laboratory areas, and from other potentially disruptive equipment so as to maintain the BSC's airflow parameters for containment.-Class II BSCs that are connected to the exhaust system (Type A2 with canopy connection or Type B2 with a hard duct) are connected in a manner that prevents positive pressurization of the cabinet.3. Autoclave<ul style="list-style-type: none">-newly installed or remanufactured autoclaves when present have been tested successfully using a biological monitor.4. Backflow preventers<ul style="list-style-type: none">-all sinks have backflow preventers which have been tested to ensure that the system will operate as specified.5. Emergency power<ul style="list-style-type: none">-all critical systems are on emergency power, including but not limited to controls, fans, security, critical equipment, etc.-a load test has been successfully completed.6. General laboratory design<ul style="list-style-type: none">-each laboratory room contains a sink for hand washing.-carpets and rugs are not present in the lab.-furniture used in laboratory work is covered with a non-fabric material that can be easily decontaminated.-bench tops are impervious to water and are resistant to moderate heat and organic solvents used to decontaminate the work surface and equipment.-spaces between benches, cabinets, and equipment are accessible for cleaning.-windows, when present, are properly sealed to prevent leakage.-an eyewash station is readily available.-illumination is adequate for all activities, avoiding reflections and glare that could impede vision.
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	<p>-doors into the laboratory are lockable.</p> <p>-door signage is present to indicate that biohazards are contained in the laboratory.</p>
RECORD KEEPING:	<p>A written document to verify that the commissioning process has been completed and the laboratory meets certification requirements will be completed by the Principal Investigator of the laboratory and subsequently a copy sent to the Biosafety Officer. Additionally, the original completed checklist is to be kept on file in the Standard Operating Procedures Manual of the laboratory.</p>
OTHER INFORMATION:	<p>All Principal Investigators and support staff working within the ABSL-2 or BSL-2 facility must undergo training as described in IBC06, Biosafety Training Program.</p> <p>Before research can commence, an active Institutional Biosafety Committee (IBC) protocol with or without an Institutional Animal Care and Use Committee (IACUC) protocol must be in place.</p>
REFERENCES:	<p>Biosafety in Microbiological and Biomedical Laboratories, 5th Edition, 2007</p>
STATUS:	<p>Updated: July 21, 2015</p>