

**LABORATORY CONSTRUCTION – GUIDELINE**

**BCA DIRECTIVE -- 11**

INDEX	SECTIONS	TITLE	MARCH 14, 2017
	SECTION A	PURPOSE	
	SECTION B	REQUIREMENTS	

**A PURPOSE:**  
To provide a reference for understanding the Maximum Allowable Quantities of Hazardous Materials allowed by code to before becoming an Hazardous occupancy.

- B CODE ANALYSIS:**
- The Florida Building Code, Building Chapters 3 & 4 and NFPA 1, Chapter 60 have very similar requirements for the requirements of occupancies with hazardous materials. The MAQ is the level allowed in the control area or Fire area that *if exceeded* the area becomes a Hazardous Occupancy that requires additional Life safety enhancements like shortened travel distances, explosion venting, higher density sprinkler coverage etc. This adds cost to the project and is not allowed in all buildings or in conjunction with all occupancies.
  - NFPA 45 has requirements for Laboratories that is also need to be met. The basic lab sizes and classifications of the labs and Lab units may limit the quantities in smaller labs and on the lower levels of the building but is typically not the quantities that limit the total amount in the control area.
  - NFPA 45 recognizes the building code and the NFPA 1 being adopted by the State of Florida making these the requirements we have to design our labs to and limit our chemical load in the building.
  - NFPA 45-2012 says:
    - 1.3.4 Where a construction or protection requirement of a governmental agency having jurisdiction is more stringent than a requirement in this standard, the more stringent requirement shall apply.
  - NFPA 1-2012 says:
    - 60.1 General Requirements.
    - 60.1.1 Applicability. Occupancies containing high hazard contents shall comply with this chapter in addition to other applicable requirements of this Code. [5000:34.1.1.1]
    - 60.4.2.1.1.3 For all occupancies not covered by 60.4.2.1.2 through 60.4.2.1.13, the maximum allowable quantities of hazardous materials per control area shall be as specified in Table 60.4.2.1.1.3. [400:5.2.1.1.3]
    - 60.4.2.1.10.1 The maximum allowable quantities of hazardous materials per control area in business occupancies, other than laboratories, shall be as specified in Table 60.4.2.1.10.1.
  - The table for Laboratory design is Table 60.4.2.1.1.3 which for all intents and purposes agrees with the FBC Chapter 3 Table 307.1.1 and as that code is what the fire inspectors should be using during the required annual inspections it is acceptable to use the NFPA 1 table.
  - FBC Building Code:**

[F] 414.1.3 Information required. A report shall be submitted to the *building official* identifying the maximum expected quantities of hazardous materials to be stored, used in a *closed system* and used in an *open system*, and subdivided to separately address hazardous material classification categories based on Tables 307.1(1) and 307.1(2). The methods of protection from such hazards, including but not limited to *control areas*, fire protection systems and Group H occupancies shall be indicated in the report and on the *construction documents*. The opinion and report shall be prepared by a qualified person, firm or corporation *approved* by the *building official* and provided without charge to the enforcing agency.