Remediation Interpretation Bulletin – 3.3.8 (Chemical Storage)

Scope
This interpretation addresses the application of requirements for Occupancy J as defined in section 3.3.8 in the Alliance Fire Safety and Structural Integrity Standard (version 1.1) for factories inspected by the Alliance for Bangladesh Worker Safety, its staff, and designated Quality Assurance Firms and their employees.

Purpose
This interpretation establishes threshold limits based upon the hazards and quantities of chemicals (other than flammable or combustible liquids and gases and flammable gases) used in a factory before fire-separated chemical storage is required to meet the design and construction requirements for Occupancy J.

Alliance Requirements
Each portion of a building or structure shall be classified individually according to section 3.3. When a building contains more than one occupancy, the building or portion shall comply with the applicable requirements of 3.4.2, 3.4.3, or 3.4.4. The mixed use provisions of BNBC Part 3 Section 2.3 shall apply except where modified by this section of this Standard. (Section 3.4.1)

Occupancies that are incidental to the main occupancy shall be considered accessory occupancies to the main occupancy when they do not exceed 10 percent of the building area of the story in which they occur. (Section 3.4.2)

All other chemical storage shall be in compliance with BNBC Part 3 Section 2.13 (sic). (Section 3.4.2.1.10)

Background
RMG factories often include manufacturing and production processes that involve the use of agents with oxidizing, corrosive, toxic, and other reactive or hazardous properties. These agents may pose one or both of the following hazards when exposed to fire: 1) they may increase the intensity of the fire or 2) they may emit dangerous products when involved in fire capable of causing serious harm to building occupants.

The Bangladesh National Building Code (BNBC), 2006, Part 3, Section 2.14 establishes exempt quantities of these materials based on their properties in Table 3.2.7. Materials stored, processed, or used in excess of these exempt quantities require control areas conforming with Occupancy J requirements. When quantities do not exceed exempt amounts, the use of these materials is considered incidental to the main use of the building or area.

Discussion
The storage, handling, and use of chemicals other than flammable or combustible liquids and flammable gases shall be considered incidental to the primary use of the building or area when quantities do not exceed the exempt amounts specified in BNBC Table 3.2.7. The use of such chemicals in quantities less
than the exempt amount over areas greater than 10 percent of the building area of the story involved shall not require fire separation of these areas as required for mixed uses of Occupancies G and J.

When the quantities of chemicals other than flammable liquids and flammable gases required for production exceed the exempt amounts listed in BNBC Table 3.2.7, a control room or area fire-separated from the factory shall be provided as required in section 3.4.4 of the Alliance Standard.

Section 3.4.2.1.10 erroneously refers to section 2.13 of BNBC Part 3 Chapter 2 for guidance concerning the segregation of chemical storage. The correct section is BNBC Part 3, Section 2.14.

Instructions
1. Consult material safety data sheets for all chemical products stored, handled, or used in the factory to determine their hazard classifications.
2. Confirm the quantities present with factory representatives or through site inspections.
3. Verify inventory and control procedures if the quantities if chemicals varies significantly over time as production requirements change.
4. Identify locations in the factory where chemicals will be stored, handled, or used.
5. Determine the quantities required to conduct production activities.
6. Require the storage of materials greater than that required to support production activities in approved containers located a safe distance from exits (>10m recommended).
7. Require the storage of quantities of chemicals in excess of the exempt amounts in BNBC Table 3.2.7 in approved storage rooms or control areas constructed as required by section 3.4.4 of the Alliance Standard and BNBC Part 3, Section 2.14.

Authority

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Updated: 29-Mar-2015

Change Log:
1. Corrected reference to Table 3.25 to read 3.2.7. (29-Mar-15)