

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory : Bakul Apparels Ltd.
Address of the Factory : Barobari, Kunia, Gazipur
Present Status of the Factory : Under Operation
Structural Assessment Conducted by : BUET
Date of Structural Inspection : 14th January 2014
Fire & Electrical Assessment Conducted by : BUET
Date of Fire & Electrical Inspection : 12th February 2014

BASIC INFORMATION:

The factory building is a five storied RC frame building. The following information was noted:

- i. Building Usage Type : Garment factory building
- ii. Structural System : RC Frame Building
- iii. Floor System : RC beam supported slab.
- iv. Floor Area : Approximately 25619 sft (2381 sq. m) per floor (Grid spacing mostly 24 ft × 21 ft)
- v. No. of Stories : Existing five story but designed for eight story
- vi. Construction Year : 2005-2006
- vii. Foundation Type : Isolated column footing (as per drawing)
- viii. Design Drawings : Structural Drawing is available but Architectural Drawing is no available
- ix. Soil Boring Report : Available (Brownish gray silt layer with N=6 is at 1.5 m below from EGL as per soil boring report). Dated: June-2002
- x. Construction Materials : Reinforced Concrete.
- xi. Generator : Outside of Building

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

Short Term (Immediate) : None
Mid Term (6-weeks) : None
Long Term (6-months) : None

The recommendations for **Fire & Electrical Safety** corrective action are:

(A): Recommendations for Fire Safety corrective actions:

Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A
--	-----

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Remove all temporary obstructions from all escape routes, aisles and passageways.</p> <p>Remove all combustible materials from substation/generator room.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p> <p>Provide exit sign in Bangla and English as per guidelines.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas. Also design to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per guidelines.</p> <p>Remove all collapsible gates/roller shutters. Produce design drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into fire-rated enclosures equipped with fire-rated side swinging doors of required dimensions opening in the direction of travel at each floor.</p> <p>Produce design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system.</p>
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per approved design.</p> <p>Install fire rated enclosure and doors of appropriate dimensions at exit to the stairs to prevent smoke and fire propagation as per approved design.</p> <p>Install standard standpipe, hose and fire pump system.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self closing fire rated door as per guidelines.</p>

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

(B): Recommendations for Electrical Safety corrective actions:

Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A
Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i>	Provide rubber mat in front of the panel. Ensure well-dressed cabling with lugs and remove loose cabling. Ensure earthing of panel body & door with fitted condition. Provide distribution board as per guideline and put identification mark on distribution panel.
Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	Provide separate service ducts for electrical cables. Provide new Emergency Lighting system. Provide appropriate Lightning Protection System as per guidelines.
Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i>	N/A