

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory : **Aba Garments Ltd.**
Address of the Factory : “Sena Kalyan Commercial Complex”, Plot # 9, Block # F, Tongi, Gazipur
Present Status of the Factory : **Under Operation**
Structural Assessment Conducted by : BUET
Date of Structural Inspection : 21st November 2013
Fire & Electrical Assessment Conducted by : BUET
Date of Fire & Electrical Inspection : 6th December 2013

BASIC INFORMATION:

The factory building is a nine storied RC structure with one basement. The building has RC beam-column framing system up to 2nd floor. The rest of the building has flat plate system (with column capitals). The following information was noted:

- i. Building Usage Type : Mixed (shopping complex and garment factory)
- ii. Structural System : Dual system (as mentioned above)
- iii. Floor System : Edge supported RCC slabs and flat plate with no edge beams
- iv. Floor Area : Approximately 38000 sq.ft (3600 sqm) per floor (maximum grid spacing: 30'x24')
- v. No. of Stories : Nine story plus one basement
- vi. Construction Year : Completed in 2003
- vii. Foundation Type : Individual & Combined footings
- viii. Design Drawings : Available
- ix. Soil Boring Report : Available
- x. Construction Materials : Reinforced Concrete, Coarse Aggregate: **Stone chips**
- xi. Generator : Outside the 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) : A Detail Engineering Assessment (DEA) has to be completed.
Long Term (6-months) : Necessary remediation's after completion of DEA.

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
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<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 transformer/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 proper directional sign.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Remove temporary structure from roof top.</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, basement, lift lobby, 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. 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>Install command station as per guidelines.</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, basement, lift lobby, 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>

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(B): Recommendations for Electrical Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>N/A</p>
<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>Provide instructions for first aid and artificial respiration from exposure to electrical shock.</p> <p>Provide cover on the cable trench and rubber mat in front of the panel.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body & door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide separate service ducts for electrical cables.</p> <p>Provide new Emergency Lighting 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>N/A</p>