

## Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory : Apparel Industry Ltd  
Address of the Factory : 82, New Airport Road, Banani, Dhaka  
Present Status of the Factory : Under Operation  
Structural Assessment Conducted by : BUET  
Date of Structural Inspection : 27<sup>th</sup> December 2013

### **BASIC INFORMATION:**

The factory building is a mixed use, existing eight storied RC frame building (one story with roof top GSM tower was recently removed). The seventh floor was also partially removed and the rest of the seventh floor is to be removed also (as reported). The following information was noted:

- i. Building Usage Type : Garment Factory (mixed occupancy)
- ii. Structural System : RC frame Building
- iii. Floor System : RC beam supported two way slab.
- iv. Floor Area : Approximately 12500 sft per floor
- v. No. of Stories : Currently eight story building (one story and GSM tower recently removed)
- vi. Construction Year : 1991-92 (exact construction history could not be known).
- vii. Foundation Type : Individual shallow foundation (as per as-built drawing)
- viii. Design Drawings : Available (prepared drawing)
- ix. Soil Boring Report : Available (done in 1991)
- x. Construction Materials : Reinforced Concrete (brick chips).
- xi. Generator : In GF 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) : The factory owner shall arrange removal of the large signboards hanged in the front façade of the building
- Mid Term (6-weeks) : Because of irregularity of the system, it is recommended to have a Detail Engineering Assessment (DEA) of the structure within six weeks
- Long Term (6-months) : Necessary remediation's after completion of DEA

Name of the Factory : Apparel Industry Ltd.

Fire & Electrical assessment conducted by : BUET

Date of Fire & Electrical Inspection : 18 January 2014

### ***(A): Recommendations for Fire 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>	N/A
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## 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>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure adequate numbers of fire drills.</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 and 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, 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/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>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, grills, storage and assembly areas, 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 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>

**(B): Recommendations for Electrical Safety corrective actions:**

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities</i></p>	<p>N/A</p>
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<i>have been rectified):</i>	
<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 &amp; 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>Provide appropriate Lightening Protection System 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>	N/A