

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

Name of the Factory	: ARK Pullover Ltd.
Address of the Factory	: Kolmesshar, NU, Board Bazar, Gazipur
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 5 <sup>th</sup> June 2014

### **BASIC INFORMATION:**

The factory building is a 2 (two) storied Reinforced Concrete (RC) building. The following information was noted:

- i. Building Usage Type : Garment factory building
- ii. Structural System : RC flat plate
- iii. Floor System : RC column supported slab
- iv. Floor Area : Approximately 12,125 sft per floor
- v. No. of Stories : Existing two storied
- vi. Construction Year : 2007-08 and 2011-12
- vii. Foundation Type : Individual column footings (as per drawing)
- viii. Design Drawings : Partially available (Udayan Consultants, Board Bazar, Gazipur)
- ix. Soil Investigation Report : Available (Anonnya Soil Layer Exploration, NU, Board Bazar, Gazipur, February 2008)
- x. Construction Materials : Reinforced Concrete (No test report on construction materials is available), Coarse aggregate: Brick chips
- xi. Generator : Located at outside of the main building. However, electric substation is located below the staircase location at the ground floor of 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) : The factory owner has been instructed to prepare and submit a load plan for all floors. The intensity of loading in any location in the floors should be maintained within the limit of 40 psf (2 kN/m<sup>2</sup>). The factory owner should arrange displaying the approved load plan for each floor on the wall in a visible location and shall adhere to it and also instructed to relocate the winding machines from the first floor level to the ground floor level or at a place with adequate floor slab thickness

Mid Term (6-weeks) : None

Long Term (6-months) : None

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

Name of the Factory	: ARK Pullover Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 11 <sup>th</sup> September 2014

#### ***(A): Recommendations for Fire Safety corrective actions:***

Fire Safety Issues	
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 (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</p>	<p>Remove obstructions from all escape routes, aisles and passageways.</p> <p>Remove all combustible materials from transformer, substation, boiler and generator room, if exists.</p> <p>Maintain minimum effective width of corridors, passageways and aisles. Confirm adequate numbers of fire drills.</p> <p>Make sure that portable extinguishers are easily accessible, monitored and maintained at regular interval as per the Guidelines.</p> <p>Provide proper directional signs and exit signs in Bangla and English as per the Guidelines.</p>
<p>Mid Term (The remedial works indicated must be carried out within a period of 6 weeks)</p>	<p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage, work areas.</p> <p>Remove all collapsible gates/roller shutters/s 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>Provide design to install proper detection and alarm system.</p>
<p>Long Term (The remedial works indicated must be carried out within a period of 6 months)</p>	<p>Ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, and work areas as per the Guidelines.</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:

Electrical Safety Issues	
<p>Immediate (the factory should not continue to be occupied until these non-conformities have been rectified):</p>	N/A
<p>Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</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>Remove burnt/broken/loose MCB/MCCB box/socket.</p>
<p>Mid Term (The remedial works indicated must be carried out within a period of 6 weeks)</p>	<p>Provide new Emergency Lighting system.</p>
<p>Long Term (The remedial works indicated must be carried out within a period of 6 months)</p>	N/A