

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

Name of the Factory	: Cosmic Sweaters Ltd.
Address of the Factory	: House # 33, Ward # 7, Block # B, Dagerchala, Main Road, Gazipur
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 6 <sup>th</sup> December 2013
Fire & Electrical Assessment Conducted by	: BUET
Date of Fire & Electrical Inspection	: 27 <sup>th</sup> December 2013

### **BASIC INFORMATION:**

On the basis of visual observations, study of design drawings of the building, and discussions with the personnel present during site visit, the following information were noted:

- i. Building Usage Type : Garments Factory.
- ii. Structural System : RC beam column frame structure
- iii. Floor System : Edge supported RC solid floor slab system on RC beam.
- iv. Floor Area : Approx. 17500 sft/floor (as per structural drawing).
- v. No. of Stories : Seven
- vi. Construction Year : 2005-2007.
- vii. Foundation Type : Isolated column footing at approx. 11 ft below present road level.
- viii. Design Drawings : Available (Design Engineer: M.Z.K. Rafiqul Islam, FIEB-3914)
- ix. Soil Investigation Report : Available (Expert Soil Engineers, Green Road, Dhaka, Dec.2004)
- x. Construction Materials : Reinforced Concrete with brick chips and deformed steel rebars 60 Grade (as reported).
- xi. Generator : Located in ground floor.

### **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
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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>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. 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, 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 &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 Lightning 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>	<p>N/A</p>