

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Speedwell Fashions Ltd.
Address of the Factory	: 94/95 (Old),46 (New), Block-C,Tongi 1/A,Tongi
Present Status of the Factory	: Under operation.
Structural Assessment Conducted by	: VEC
Date of Structural Inspection	: 22 th March, 2015
Fire Assessment Conducted by	: VEC
Date of Fire Inspection	: 22 th March, 2015
Electrical Assessment Conducted by	: VEC
Date of Electrical Inspection	: 22 th March, 2015
BGMEA Membership No.	: 2834

BASIC INFORMATION:

The factory building is a three storied RCC building with beam and column system and flat slab system. The following information was noted:

i. Building Usage Type	: Garment Factory.
ii. Structural System	: PEB shed.
iii. Floor System	: Mezzanine is RCC slab.
iv. Floor Area	: Total floor area 20,300 sq. ft.
v. No. of Stories	: Single storied
vi. Construction Year	: 2014-2015 (factory representative informed us).
vii. Foundation Type	: Isolated column footing.
viii. Design Drawings	: Available- approval drawing, structural design drawing, architectural design drawing, soil test report. Not available: as built machine layout plan, floor load plan (for mezzanine floor).
ix. Soil Investigation Report	: Available.
x. Construction Materials	: Steel column (I section), rafter, purlin and mezzanine floor slab (brick aggregate).
xi. Generator	: Not installed.

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)	: N/A
Mid Term (6-weeks)	: N/A
Long Term (6-months)	: 1. Building engineer to prepare as built machine layout plan and floor load plan (for mezzanine floor).

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

(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>	<p>N/A</p>
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (1 ~ 2 weeks) and should be a regular activity</i></p>	<ul style="list-style-type: none"> • Factory needs to conduct fire drill quarterly (4 times a year) under the fire safety plan and needs to kept the written record of such drills for at least 3 years for the inspection of fire brigade whenever called for. • Factory need to have proper testing plan & record of fire safety equipment. • Factory needs to have marked aisles in all working floor according to 0.9m for one side seat and 1.0m for both side seat. • Lights in storage area needed to be installed with protective covers and conduits. • Combustibles are to be managed with good housekeeping. Storage facilities with no air-conditioning duct shall be minimum 2.9m and when used as a storage facility there shall be a minimum clearance of one third the floor height from the ceiling to the top of the storage stack. • All required means of exit or exit access in buildings or areas requiring more than one exit shall be signposted. The signs shall be clearly visible at all times, where necessary supplemented by directional signs.
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<ul style="list-style-type: none"> • Factory needs to prepare as built drawing with floor machine layout showing means of escape with proper dimension. • Fire manager/Director need to have safety training from proper authority & worker of the factory should as far as possible be trained for use fire extinguisher. • All the exit doors need to be replaced by side swinging so that un-lockable doors can be opened easily in the direction of evacuation without the use of a key. • Factory needs to be installed with adequate illuminated emergency lighting in floors, exits & stairs.(Escape route). • Factory needs to have emergency backup power for critical fire safety system with sufficient capacity & arrangement according to NTPA Guideline. • Factory needs to install standby generator for

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	emergency backup power.
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<ul style="list-style-type: none"> • Fire department pre-plan needs to be developed. • Storage area need to be protected with 2 hours rated construction and 1.5 hours rated opening or doors. • Factory need to install centralized and automatic fire detection & alarm system on all occupied floors, including other tenanted floors of the building as per NTPA Guideline. • The factory need to install manually operated electrical fire alarm system and automatic fire alarm system with single or multiple call boxes on all occupied floors, including other tenanted floors of the building. • Factory needs to install control panel for centralized automatic smoke detection & fire alarm system according to NTPA Guideline.

(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>	N/A
<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>	N/A
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<ul style="list-style-type: none"> • Install graded rubber mats in front of all distribution boards. • Provide Instruction board for first aid and artificial respiration in substation room and generator room. • Fill the transformer breather with fresh Silica gel and oil cup with fresh Oil. • Provide dedicated & adequate size of earthing with proper identification for each circuit and ensure continuous earth path is back to main building intake. • Ensure all electrical cables are sized according to capacity of circuit breakers. • Ensure Lighting fixtures are supported properly from the structure.

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<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<ul style="list-style-type: none">• Develop an electrical layout diagram and an as-built single line diagram detailing key components and capacity of the electrical system.• Ensure distribution board has no opening and all live internal components are concealed properly.• Provide dedicated & adequate size of neutral with proper identification for each circuit.• Install separate distribution board for lighting and power circuit.• Install lightning protection system on the shed.
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