

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

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Name of the Factory	: SNV Stiches Ltd.
Address of the Factory	: Plot No. 558 Satar Kul, Uttor Badda, Dhaka, Bangladesh.
Present Status of the Factory	: <b>Under Operation</b>
Structural assessment conducted by	: Alliance
Date of Structural Inspection	: 11-July-13
Fire assessment conducted by	: Alliance
Date of Fire & Electrical Inspection	: 20-September-14

### **BASIC INFORMATION:**

The present garment factory comprises of one Main Building and one Ancillary Building. The following general information was noted:

i.	Building Usage Type	: Garments Factory
ii.	Structural System	: Steel framed roof structure supported on a system of perimeter cast-in-place reinforced concrete beam/column frames.
iii.	Floor System	: concrete slab bearing on grade, reported to be 6” thick by the factory representative.
iv.	Floor Area	: 4400 SF
v.	No. of Stories	: 1 story
vi.	Construction Year	: 2007
vii.	Foundation Type	: Unknown
viii.	Design Drawings	: Partially Available
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Reinforced Concrete Materials
xi.	Generator	: Ground floor in ancillary building

### **RECOMMENDATIONS FOR CORRECTIVE ACTION:**

The recommendations of corrective action for Structural, Fire and Electrical Safety comprises of Short Term, Mid Term and Long Term basis are as follows:

#### **The recommendations for Structural Safety corrective actions are:**

Immediate : NA

Short Term: (3 Weeks) :

- i. Under guidance from a qualified structural engineer arrange geotechnical investigation at close vicinity of the structure and make the report available for review.

Mid Term (6 Weeks) :

- i. Have a qualified structural engineer prepare credible as-built documents based on the requirements of Part 8 Section 8.19 of the Alliance Standard.
- ii. Engage a qualified structural engineer to develop the required documents to confirm the structural integrity of the buildings. Documents must comply with Alliance Standard Part 8 Section 8.19 and 8.20.
- iii. Have a qualified structural engineer document compliance with the seismic and wind requirements stated in the 2006 BNBC.

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

- iv. Engage a qualified structural engineer to confirm satisfactory structural performance of the buildings under wind loading.
- v. Adequately anchor and brace all non-structural elements to resist earthquake forces to comply with the BNBC and Alliance Standard.
- vi. Have a qualified structural engineer provide further analysis of the identified cracks to determine the appropriate course of corrective action.

Long Term (6 Months) :

- i. Repair the exterior façade system to prevent water intrusion.
- ii. Provide Certificates of Occupancy for review.

### The recommendations for Electrical Safety corrective actions are:

Immediate (3 to 6 Days)	Keep the generator room clean and free of all type of dirt, debris.
Short Term (3 Weeks)	
Mid Term (6 Weeks)	<p>Generator room should be fire rated.</p> <p>All boxes and enclosures (including transfer switches, generators, and power panels) for emergency circuits shall be permanently marked so they will be readily identified as a component of an emergency circuit or system.</p> <p>The required marking can be by color code, the words “emergency system,” or any other method that identifies the box or enclosure as a component of the emergency system.</p> <p>Clear identification/markings must be available at LT, MDB and DB MCB/MCCB. Clear and permanent identification marks are required to be painted in all distribution boards, switchboards, sub main boards and switches as necessary.</p> <p>Provide capacity information labels (Maximum current rating, no of circuit breakers etc.) for Switchboards and distribution boards.</p> <p>Ensure generator room is properly illuminated (At least 150 lux).</p> <p>Provide covers or blanks to conceal all live internal components of switchboards and/or distribution boards.</p>
Long Term (6 Months)	<p>Provide earthing/grounding system for All metal in the building.</p> <p>Provide earthing of equipment at required locations and connect to required number of electrodes. Refer to the BNBC for required number of electrodes.</p> <p>Provide protective devices (circuit breakers) for all circuits</p>

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

	<p>drawn for loads.</p> <p>Consult with a qualified Electrical Engineer and ensure electrical cables are sized according to capacity of circuit breakers.</p> <p>Complete thermographic scans at least on a three year cycle. Thermographic scans should be completed in accordance with the Standard for Infrared Inspection of Electrical Systems &amp; Rotating Equipment and NFPA70B or a comparable standard.</p> <p>Need to install the generator in an appropriately sized room.</p> <p>Consult with an expert electrical engineer and make sure your system is secured against lightning.</p> <p>Provide UPS for uninterruptible power supply.</p> <p>Consult with an expert electrical engineer and make sure lightning system is properly installed.</p>
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### The recommendations for Fire Safety corrective actions are:

Immediate (3 to 6 Days)	
Short Term (3 Weeks)	Remove all hasps, locks, slide bolts, or other locking devices from means of egress.
Mid Term (6 Weeks)	The occupant loads shall be posted for every production floor in a conspicuous space near the main exit or exit access doorway for the space. Develop a testing and maintenance program that ensures the emergency power for exit signs is tested at least once per year. If battery operated signs are used, these lights are to be tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year.
Long Term (6 Months)	Install an automatic fire alarm and detection system in accordance with NFPA 72. Once installed, arrange for direct connection of the fire alarm and detection system to a central station monitoring service or the Fire Service and Civil Defense. Until that time that a central station monitoring service or direct connection to the Fire Service and Civil Defence can be set up, a person trained to contact the Fire

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

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	<p>e Service and Civil Defence in the event of fire alarm activation shall be provided. An annunciator shall be located in a constantly attended location (such as a fire control room) to alert this person.</p>
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