Name of the Factory	:	**CROSSLINE WOVEN GARMENTS LTD. (UNIT-2)**
Address of the Factory	:	House-16, Road-13, Section- 11-½, Pallabi, Mirpur, Dhaka
Dhaka Present Status of the Factory	:	**Under Operation**
Structural assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	:	30 June, 2014
Fire & Electrical assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	:	8 March, 2014

Basic Information: The present garment factory is a commercial building with beam-column frame system. The following general information was noted:

i.	Building Usage Type	: Garment factory
ii.	Structural System	: R.C Beam and column frame with a 2-way solid slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: The building floor dimension is 40mX28m
v.	No. of Stories	: 9 storied
vi.	Construction Year	: 1994
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available (Permit drawing)
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Unavailable
xi.	Generator	: Basement

Recommendations for Corrective Action: The recommendations of corrective action for both Structural and Fire & Electrical Safety are as follows:

The recommendations for Structural Safety corrective actions are:

Immediate (Now): NA

Mid Term (Within 6 Weeks):

1. Carry out an Engineering Assessment to verify if the columns are adequately designed for the existing and proposed building.
2. In-situ concrete testing is required.
3. Produce loading plans for all floors according to its design parameter.
4. Remove or dispersed all heavy construction material on the roof to respect a distributed load of 2.0 kPa.
5. Carry out an Engineering Assessment on steel roof design and connections to determine if the structure is adequate and securely fixed.
6. Carry out an Engineering Assessment to verify that the building is stable under lateral loads as per BNBC.

Long Term (Within 6 Months):

1. Carry out recommendations of the Engineering Assessment.
2. Maximum loading should be clearly displayed in every storage area.

3. Updated structural drawings by Factory Engineer.
4. Produce as-built drawings for all shed.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

1. Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Reduce occupant load to not more than 453 persons based on the available exit capacity.
3. Replace all gates along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

Short Term (Within 3 Months):

1. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.
2. Protect the two stairs in the southwest corner of the seventh floor by adding a 2-hr fire-rated exit passageway to connect them. The exit passageway should be designed such that it can only be used for egress.
3. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
4. Separate the boiler and transformer room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
5. Provide a minimum 1-hr fire rated construction. Seal and/or protect all openings to maintain the required fire separations.
6. Separate the flammable liquid storage room by a minimum 2- hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
7. Modify the egress door to swing in the direction of egress travel.
8. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
9. Provide emergency lighting that is on standby or backup power.

Mid Term (within 6 Months): NA

Long Term (More than 6 months):

1. Provide sprinkler protection for discharge floor in accordance with NFPA 13.
2. Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.
3. Provide automatic sprinkler protection throughout the building in accordance with NFPA 13.

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Install additional lights inside generator room and ensure minimum 150 lux illumination around the room for performing easy and smooth maintenance and inspection.
2. Wastage materials must be removed from room and keep it clean.
3. MCCB must be installed in non-combustible protective enclosure and keep it dust and vermin proof. Establish a periodic cleaning program to keep all the duct/trays/channel dust-free.
4. Install a vertical cable tray and cables must be supported on trays in full length.
5. Clean the electrical room(s) from any item those are not necessary for regular operation.
6. Replace damaged flexible pipes. Use of flexible wires must be restricted to fitting wires and short connections.
7. The transformer must be installed with barrier walls between transformer and other panels. The walls must be fire resistant and should have height up to the ceiling.
8. Establish a routine cleaning program to keep neat and clean the transformer room. Shut the power of the transformer and clean the exterior of the transformer at scheduled period.
9. Shut down the transformer and replace the silica gel or perform maintenance to remove moisture from it.
10. Earthing bus bar must be clean and wires connected to bus bar by proper cable lugs.
11. Lint/dust should be Clean regularly from PFI panel.
12. Cables passing underground or through permanent walls must be protected in steel/PVC pipes and remaining holes around the pipe must be sealed.
13. Earthing wire must be fixed with generator frame with two points.
14. Make circular hole at the base plate/top plate of change over and provide cable gland according to the respective cable size for cable entry and exit so that the cables are not stressed on the sharp edges of the hole of panels. Provide covers (of non-combustible material) if any additional gap remains after installing cable glands.
15. Clean electrical room(s) from any item those are not necessary for regular operation.
16. Provide earth connection for body and doors of metallic distribution boards using green cables preferably braid so that the metallic door remains at zero potential all the time.
17. Recommended to avoid branch circuits which need to be controlled separately.
18. Every cable shall be identified at its termination point by colors and/or lettering.
19. Earthing strip should be connected with proper device.
20. Panel top cover must be installed to prevent ingression of lint/dust into the panel and phase separator should be installed.

Short Term (Within 3 Months):

1. Install cable duct to protect the generator output cables and provide covers made of non-combustible material preferably metal to protect the cables' insulation from any physical damage as well as prevent the ingress of debris, dust and lint.

2. Remaining gap must be sealed and cable must be supported on cable trays in complete length of cables.

3. Install metallic (non-combustible) cable duct over the floor and provide metallic cover on it to keep it dust and vermin proof. Establish a periodic cleaning program to keep all the duct/trays/channel dust-free.

4. Using of flexible pipe must be avoided for cabling and cables must be supported by the cable tray.

5. Install metallic (non-combustible) cable duct over the floor and provide metallic cover on it to keep it dust and vermin proof. Establish a periodic cleaning program to keep all the duct/trays/channel dust-free.

6. Disconnect the power source of the cable laid into channel and clean dust and debris of all interior components. Establish a periodic cleaning program and maintain records of the activities. Provide cover made of non-combustible material on the channel for preventing ingress of dust and debris in future.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA