Name of the Factory	:	**COLOUR & FASHION INDUSTRIES LTD.**
Address of the Factory	:	Madhkhola, Bairagirchala, Sreepur, Gazipur
Dhaka Present Status of the Factory	:	**Under Operation**
Structural assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	:	31 May, 2014
Fire & Electrical assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	:	15 June, 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	: Steel moment frame with one-way spanning composite trapezoidal deck
iii.	Floor System	: Beam slab
iv.	Floor Area	: The floor area of the factory is 20,000 sq. ft.
v.	No. of Stories	: Single storied
vi.	Construction Year	: 2012
vii.	Foundation Type	: Pad foundation
viii.	Design Drawings	: Available (Permit drawing)
ix.	Soil investigation Report	: Available
x.	Construction Materials	: Unavailable
xi.	Generator	: Ground floor generator building

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. Reduce all storage to a maximum of 2m in height in single storey building.
2. All piles of material to be self-supporting, and not leaning against walls or posts.

Long Term (Within 6 Months):

1. Factory Engineer to establish loading plan which ensures that storage does not generate any horizontal loads.
2. Loading plan should also ensure that storage on any suspended floor slab is within 3kN/m2.
3. Storage to be monitored to stay within prescribed limits.
4. Factory Engineer to provide calculations confirming the capacity of the supporting beams and floor deck under the loading generated by the water tanks.
5. Original design calculations to be presented, determining whether or not cable bracing is required.
6. If original calculations are not available, Factory Engineer to carry out a back-check, establishing the capacity of the building to act as a moment frame.

7. If cross-bracing is necessary, then all slack or removed bays to be repaired/reinstated.

8. Calculations to be provided, either existing design calculations or back-checks, to demonstrate the capacity of the actual foundations used against the soil conditions as detailed in the Soil Test Report.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

1. Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

2. Replace all gates / sliding doors 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.

3. Keep egress paths and stairs clear of storage.

4. Remove storage.

Short Term (Within 3 Months):

1. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows:

    -Maximum height of 2.4m and maximum area of 23m2

    -If sprinkler protected: maximum height of 3.66m and maximum area of 93m2

    Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.

2. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.

3. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

4. 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.

5. Separate the boiler room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.

6. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.

7. Separate the boiler room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.

Mid Term (within 6 Months):

1. Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.

Long Term (More than 6 months):

1. Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month): NA

Short Term (Within 3 Months):

1. HT cable dropping from 11kV pole must be protected in steel pipe of required size at least 2m from the ground level to protect from physical damage by moving objects.

2. Provide lighting system inside the transformer room. Adequate illumination is essential.

3. Arcing horn must be aligned and gaps maintained as per the transformer manufacturer's instruction.

4. Fill the Breather oil cup with transformer oil up to the required level as instructed by the manufacturer. Consult with transformer servicing company before performing the task. Establish a routine maintenance & inspection program for transformer as well as all other electrical equipment to ensure any future repetition of the occurrence.

5. 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.

6. Make circular hole at the base plate/top plate of panels 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 noncombustible material) if any additional gap remains after installing cable glands.

7. Thatch roof is vulnerable to fire. The roof may be change to noninflammable material according to the standard.

Mid Term (Within 6 months):

1. Batteries must be installed on rigid rack made of noncombustible material; suitable for installation of lead acid batteries.

2. Flexible PVC conduit wiring must be additionally supported on cable tray and risers.

Long Term (More than 6 months):

1. The generator foundation must be constructed above local floor level according to the standard. Construct a concrete foundation and fix it with proper nuts and bolts.

2. Power cables tray installed near boiler steam lines must be protected from external heat and moisture.

3. Battery bank must be installed on rigid racks suitable for installation of lead acid batteries.

4. Install the cable tray/ladder/ duct up to the cable entry of the panel in order to support the cables. Ensure the cables are tightly latched with the ladder and provide covers made of non-combustible material preferably metallic sheet to protect the cables' insulation from any physical damage as well as prevent ingress of debris, dust and lint.