Name of the Factory	:	**IMMACULATE APPAREL, LTD**
Address of the Factory	:	C-35, Section -7, Mirpur C/A, Dhaka 1216, Bangladesh
Dhaka Present Status of the Factory	:	**Under Operation**
Structural assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	:	23 March, 2014
Fire & Electrical assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	:	23 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 Building with Beam and Slab Structural Frame
iii.	Floor System	: Beam slab
iv.	Floor Area	: Unavailable
v.	No. of Stories	: 5 storied
vi.	Construction Year	: 1980
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Unavailable
xi.	Generator	: On ground floor shared by whole market 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):

1. Reduce the stacking height of the fabric rolls to ensure that the loading from the fabric does not exceed 300kg/m2 at any area.
2. Clear away the piles of debris from the roof Floor.

Mid Term (Within 6 Weeks):

1. Building Engineer to check structural capacity of floor elements to establish actual structural capacity, and then implement loading demarcation plan for the storage area in particular.
2. Reposition the water tanks around the roof to allow a good spread of loading, and avoid concentration of water tank loads on one particular area of the roof slab.
3. Building Engineer to carry out detailed structural survey of all structural elements and identify all areas of damage which require repair.
4. Together with the structural defect repairs, Building Engineer to carry out detailed structural survey of the entire building to identify concrete strength by concrete cores, rebar sizes and provisioning by non-intrusive and intrusive methods.

Long Term (Within 6 Months):

1. Maintain loading plan and check for noncompliance.

2. Remove the roof garden feature.
3. Prepare a comprehensive inspection and maintenance program to ensure that future defects are repaired promptly.
4. Prepare accurate architectural layout plans and structural drawings of the building in its current state.

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. Keep egress paths and stairs clear of storage.
3. Remove all storage from exit stairs and egress paths.
4. 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.
5. Configure the fire alarm system to initiate automatic occupant notification on all floor levels to facilitate whole building evacuation upon any manual fire alarm station activation.

Short Term (Within 3 Months):

1. Separate the boiler room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
2. 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.
3. 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.
4. Provide minimum aisle widths of 36-in.
5. Provide a minimum 2-hr fire rated exit corridor between the day-care room and exit stair.
6. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
7. Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.

Mid Term (within 6 Months):

1. Modify stair to discharge directly outside or Provide 2-hr fire-rated exit passageway leading directly outside.

2. Replace the single-station smoke alarms with automatic smoke detectors tied into the fire alarm system. Configure the fire alarm system to initiate occupant notification upon activation of any two smoke detectors in addition to the manual fire alarm stations.

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):

1. Service cables must be supported on trays or raisers throughout its length to prevent any damage to its cable insulation.

2. Maintain safe working space (1 meter preferably) around the existing generator for ease of its maintenance.

3. Remove all the combustible materials from the generator room.

4. The cable duct/pipes must be supported on wall, clamped at regular interval (must not supported on panel). Flexible conduit must not be used for long point wiring (except for special wirings).

5. Wooden frame for existing switch boards must be replaced by steel frame.

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. MCCB (electrical devices) mounted on the wall must be installed with protective metallic enclosures of minimum 20 SWG thickness.

8. Generator frame must be connected to 2 separate earth connections with proper size earth conductor (35 sqmm).

Short Term (Within 3 Months):

1. Cables must be supported on cable tray/ladder with covers.

2. Necessary ventilation fan must be installed on required sides.

3. Cable must be terminated individually on bus bar (termination must not be done on same point of bus bar).

4. 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.

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. Re-wire able fuse must be replaced with MCB for overload and short circuit current protection of the loads.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA