Name of the Factory	:	**COMFIT COMPOSITE KNIT LTD. (UNIT-3)**
Address of the Factory	:	Vannara Road, Po-Purbo Mouchak, Ps-Kaliakor, Gazipur, Bangladesh
Dhaka Present Status of the Factory	:	**Under Operation**
Structural assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	:	7 May, 2014
Fire & Electrical assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	:	6 August, 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	: RC structure with flat slabs on 2nd , 3rd and roof, with a two way spanning slab and beam on 1st floor
iii.	Floor System	: Beam slab
iv.	Floor Area	: The factory has an area of 30,000 Sq.ft in total
v.	No. of Stories	: 4 storied
vi.	Construction Year	: 2005
vii.	Foundation Type	: Isolated pad foundation
viii.	Design Drawings	: Available (Permit drawing)
ix.	Soil investigation Report	: Available
x.	Construction Materials	: Brick chip aggregated
xi.	Generator	: On the ground floor

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. Structural drawings to be amended ensuring that inconsistencies between surveyed condition and as-built is addressed.
2. Building engineer to confirm current design appropriate and revise documentation as required.
3. Building engineer to produce loading plans to be displayed at each floor level. Factory manager to actively manage floor usage in accordance with the loading plan.
4. Engineer to carry out detail survey and alter drawings to reflect the as built situation.
5. Structural drawings to be amended ensuring that inconsistencies between surveyed condition and as-built is addressed.
6. Building engineer to review stability of rising elements and the steel roof structure.
7. Building engineer to design any additional structure deemed necessary.
8. Engineer to access structural adequacy of the existing building to support the 5thstorey prior to any construction commencing on the 5thstorey.

9. Building management should monitor repair and should a crack reopen consult with Building Engineer as to most suitable course of action.

Long Term (Within 6 Months):

1. Implement loading plan.
2. Build additional structure as per building engineers recommendations.
3. Only following verification of the column design strength as set out above should any additional storey be constructed.
4. Verify insitu concrete stress either by 100 dia cores or existing cylinder strength data for the columns.

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. Remove all storage from exit stairs and egress paths.
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. Remove and relocate the electric appliance to the exterior of the stairwell.
2. Separate the boiler and generator rooms by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
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 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas and office rooms 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.
5. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
6. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

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):

1. The PVC/rigid pipe must be used for surface wiring which must be continuous through-out its length and properly supported (clamped with saddle, at regular interval of 600 mm).The conduit shall run vertically or horizontally, shall never at angle.

2. Install separators between different phases of MCCB. Existing phase separators fabricated from insulating materials may not provide the required insulating properties for the type of MCCB installed. Standard separators provided by the MCCB manufacturer must be used.

3. Arrange the cables, transferring from cable tray/ladder to duct, on the existing ladder and if required, install additional ladders to support the cables. Ensure the cables are tightly attached with the ladder and provide covers made of noncombustible material preferably metallic sheet to protect the cables' insulation from physical damage as well as prevent entering debris, dust and lint.

4. Install ladder/tray to support the cables. 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. Assign an electrical engineer to determine the capacity of the installation and redesign the wirings of the panel. If the wirings and loads exceed the capacity of the panel, install additional panel. Establish a load management program for avoiding any installation exceeding its capacity in future.

6. All the device, circuit board, terminal block and switch must be firmly fasten. Use cable trunking /Panduit/slotted wiring channel for cable wiring.

7. Use PVC slotted duct inside the panel to support and latch the cables.

8. PFI panel may be relocated in a safer place with proper support and fixation. Or seal the water leaking from the sanitary pipe.

9. Provide cover made of noncombustible material on the channel with end cover for preventing ingress of dust and debris. Initiate periodic cleaning program for all the electrical channels and ducts.

Short Term (Within 3 Months):

1. The factory must have As-built electrical SLD with electrical wiring layout designs and drawings. Any changes in load, protection system, conductors, Generation and supply system must be reflected in the As-built SLD and drawings.

2. Thermo graphic scanning of the entire electrical system must be performed on tri-annual basis and recorded.

3. Insulation resistant test of all the cables must be performed once every 5 year cycle and recorded.

4. Electrical safety training and awareness program for the electrical personal and workers must be initiated and recorded.

5. Cables from tray to panel at short distance may be protected in PVC flexible pipe. Install baseplate to fix cables entering panel with cable gland.

6. Motor in boiler must be fixed firmly on the concrete floor (Foundation is required).

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA