

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: BK Apparels Ltd.
Address of the Factory	: 31, D.I.T Road, Malibagh Chowdhury Para, Malibagh, Dhaka
Present Status of the Factory	: Partial Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 2 nd November 2014

BASIC INFORMATION:

The garment factory building is an eight-storied RC beam column frame structure. The following information was noted:

i.	Building Usage Type	: As Garments Factory, mosque, residence
ii.	Structural System	: RC Frame structure
iii.	Floor System	: Edge supported RCC slabs; thickness= 4.5"
iv.	Floor Area	: Approximately 483 sq. m (5200 sft) per floor
v.	No. of Stories	: Eight stories, although approved as a 7-storied residential-cum-commercial building by RAJUK
vi.	Construction Year	: Started in 1977 and finished in 2003
vii.	Foundation Type	: Individual footing (Interior, exterior and corner footing sizes are 9.5'x7.5', 9'x7', 7'x7' respectively, as per drawing)
viii.	Design Drawings	: Approval as 7 storied residential-cum-commercial building (RAJUK No. R-3C-586/2003/649, dt. 16/9/2003); Designed as 6 storied building by Engr. Pankaj KR Nath, MIEB-5464, dt. 6/10/1998
ix.	Soil Investigation Report	: Available (Done by City Soil Engineers, 119 East Rajabazar, Tejgaon, Dhaka-1215, March 1995)
x.	Construction Materials	: Reinforced Concrete with Brick Chips (verified) and reinforcing steel (40 grade) as reported
xi.	Generator	: At the ground floor (88 kVA)

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

Short Term (Immediate) : Top 2 floors (6th and 7th) must be evacuated immediately and DEA needs to be done immediately. However, at present there is no observed distress in the building and as such usage of the building up to 5th floor may continue at the present level provided current loading intensity is maintained.

Mid Term (6-weeks) : None

Long Term (6-months) : None

The recommendations for **Fire & Electrical Safety** corrective action are:

Name of the Factory	: BK Apparels Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 23 rd December 2014

(A): Recommendations for Fire Safety corrective actions:

Fire Safety Issues	
Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A

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<p>Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Remove all temporary obstructions from all escape routes, aisles and passageways.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Remove all combustible materials from generator room.</p> <p>Ensure adequate numbers of fire drills.</p> <p>Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p> <p>Provide proper directional sign and exit sign in Bangla and English as per guidelines.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Remove temporary structure from roof top.</p> <p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage, offices, work areas.</p> <p>Remove all collapsible gates/roller shutters/sliding doors. Prepare plans to ensure all exit access doors are side- swinging type and open to the direction of traffic flow.</p> <p>Produce design drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into fire-rated enclosures equipped with fire-rated side swinging doors of required dimensions opening in the direction of travel at each floor.</p> <p>Also design to ensure proper separation of high risk areas (e.g., generator room) as per guidelines.</p> <p>Produce design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system. Install command station as per guidelines.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage, offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., generator rooms) as per approved design.</p> <p>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</p> <p>Install fire rated enclosure and doors of appropriate dimensions at exit to the stairs to prevent smoke and fire propagation as per approved design.</p> <p>Install standard standpipe, hose system. Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self-closing fire rated door as per guidelines.</p>

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(B): Recommendations for Electrical Safety corrective actions:

Electrical Safety Issues	
Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A
Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i>	Provide instructions for first aid and artificial respiration from exposure to electrical shock. Ensure well-dressed cabling with lugs. Ensure earthing of panel body & door with fitted condition. Provide distribution board as per guideline and put identification mark on distribution panel.
Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	Provide separate service ducts for electrical cables. Provide new Emergency Lighting system. Provide appropriate Lightning Protection System as per guidelines.
Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i>	N/A