

FIRE SAFETY INSPECTION REPORT

REDPOINT JACKETS LTD, DHAKA, BANGLADESH



ACCORD
on Fire and Building Safety in Bangladesh

January 3, 2014

SUMMARY

The four story factory housing Redpoint Jackets Ltd. located in Dhaka Export Processing Zone, Dhaka, Bangladesh was surveyed for fire safety on 08 December 2013 by Hughes Associates, Inc. This summary identifies the critical and major deficiencies that were identified during the inspection as documented in the Fire Safety Inspection Report, dated 31 December 2013, submitted to the Accord.

The factory building was surveyed to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the Accord. The scope of this initial fire safety inspection was limited to the review and identification of critical and major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

Table 1 summarizes the critical and major fire safety issues identified during the inspection. Recommendations have been provided to address each issue. Reference photos are provided in Attachment 1.

Each finding has been assigned a priority based on the life safety risk associated with the noted condition. The priority classifications are defined as follows:

Critical: Critical findings and recommendations should be addressed immediately. These recommendations are considered essential to maintaining an acceptable level of life safety for occupants throughout the building.

Major: Major findings and recommendations should be addressed as soon as possible. These recommendations are considered necessary to maintaining an acceptable level of life safety for occupants on a particular floor or area.

An implementation schedule shall be developed by the factory to remediate each of the findings in Table 1. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the Accord for approval.

Table 1. Findings and Recommendations

No.	Category	Finding	Recommendation	Priority	Photo Ref
F-1	Fire-Rated Construction, Egress	The main exit stair and rear exit stair are separated from the work areas, and other spaces, on each floor by non-fire-rated construction. The stairs open directly into areas used for storage on some floors. A fabric spot cleaning room is located under the west stair.	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.	Critical	1, 2, 3
F-2	Fire-Rated Construction, Egress	The west exit stair discharges inside the building on the ground floor.	Provide a 2-hour fire-rated separation of the exit discharge path from all areas on the ground floor and do not allow storage within the separated discharge path. Alternatively, provide automatic sprinkler protection throughout the ground floor and provide a clear and unobstructed discharge path to the outside.	Critical	3
F-3	Fire-Rated Construction, Egress	Flammable liquid storage, combustible storage and boilers are located along exterior egress paths from the north exit stair discharge on the ground floor.	Remove all storage from egress paths. Provide dedicated storage rooms separated by minimum 2-hr fire-rated construction for flammable storage and boiler	Critical	4, 5

No.	Category	Finding	Recommendation	Priority	Photo Ref
			rooms.		
F-4	Fire-Rated Construction, Egress	Unsealed penetrations and openings are located in the exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Major	6
F-5	Fire-Rated Construction	Areas used for combustible storage on production floors and are not separated by fire-rated construction.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction on all production floors where transient storage is required for operations. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.4 m 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.	Major	7
F-6	Fire-Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies where the electrical service rises from floor-to-floor.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level. Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.	Major	8
F-7	Fire-Rated Construction	The boiler room (ground floor) and transformer room (1 st floor) are not	Separate each of the rooms by minimum 2-hr fire-rated	Major	9, 10

No.	Category	Finding	Recommendation	Priority	Photo Ref
		separated by fire-rated construction (openings, non-rated doors, penetrations).	construction. Seal and/or protected all openings to maintain the required fire separations.		
F-8	Fire-Rated Construction	The chemical lab and flammable storage area are not separated from the floor and exit stair by fire-rated construction (openings, non-rated doors, penetrations).	Separate each of the rooms by minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.	Major	11, 12
F-9	Fire-Rated Construction	Diesel fuel storage tanks (18,000 L) are provided approximately 3 m from the building with no fire rated separations.	Provide containment of diesel fuel if tanks were to rupture. Separate diesel fuel tank area by minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.	Major	13
F-10	Egress	Collapsible (concertina) gates and sliding steel doors with locks are provided along means of egress and at exterior exit doors. Note - all gates were open and unlocked during the inspection.	Remove all lockable gates and doors at exit stairs and along the means of egress. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Critical	1, 14
F-11	Egress	Storage is located in the exit stairs and in the egress path of the alley south of the building.	Maintain all designated egress pathways clear and remove storage from exit stairs.	Critical	15
F-12	Egress	Non-fire and life safety related equipment is located in the exit stairs.	Remove all non-fire and life safety related equipment from the exit stairs.	Major	16
F-13	Egress	Handrails are only provided on the inside of stairs. North and west exit	Provide handrails on the inside and outside of all exit stairs.	Major	17

No.	Category	Finding	Recommendation	Priority	Photo Ref
		stairs require an intermediate handrail due to width of stair.	Provide an intermediate handrail in all exit stairs greater than 2.24 m in width.		
F-14	Fire Alarm	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants. Some detectors are missing from their base or installed well below the ceiling.	Replace the single-station smoke alarms with automatic smoke detectors tied into the fire alarm system located in accordance with NFPA 72. Configure the fire alarm system to initiate occupant notification upon activation of any two smoke detectors in addition to the manual fire alarm stations.	Critical	18, 19, 20
F-15	Fire Alarm	Although building fire alarm notification system was not activated, it is anticipated that the notification is insufficient in areas, particularly the washing area, due to ambient noise levels.	Provide additional fire alarm sirens to supplement the existing notification ensuring that the alarm can be easily heard and distinguished from all areas during normal operations.	Critical	--
F-16	Fire Alarm	Inspection, testing, and maintenance records for the fire alarm system were not available at the time of the survey.	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Critical	--
F-17	Emergency Lighting	Emergency lighting is provided on the floors and in the exit stairs. The adequacy of the system was not fully tested; however several units did not function properly (lights were not lit). Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated for all floor levels along egress routes.	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.	Major	21

No.	Category	Finding	Recommendation	Priority	Photo Ref
		A manual on-off switch is also provided on the emergency lighting units.	Remove the manual switches from the units to prevent them from being switched off.		

ATTACHMENT 1 – PHOTOGRAPHS OF FINDINGS/ISSUES



Photo 1 – Exit stair open to production area (typical)



Photo 2 – Exit stair open to production area (typical)



Photo 3 – Exit stair open to production floor with spot cleaning room under the stair



Photo 4 – Flammable and combustible storage in covered exterior egress path



Photo 5 – Boiler room open to exterior egress path



Photo 6 – Unsealed opening in ground floor of north exit stair



Photo 7 – Storage areas on production floor



Photo 8 – Unsealed ceiling/floor penetrations, electrical riser



Photo 9 – Boiler room, no fire separation



Photo 10 – Oil transformer and switchgear, nor fire separation



Photo 11 – Chemical lab, no separation



Photo 12 – Chemical storage room, no separation



Photo 13 – Diesel fuel storage tanks, no separation

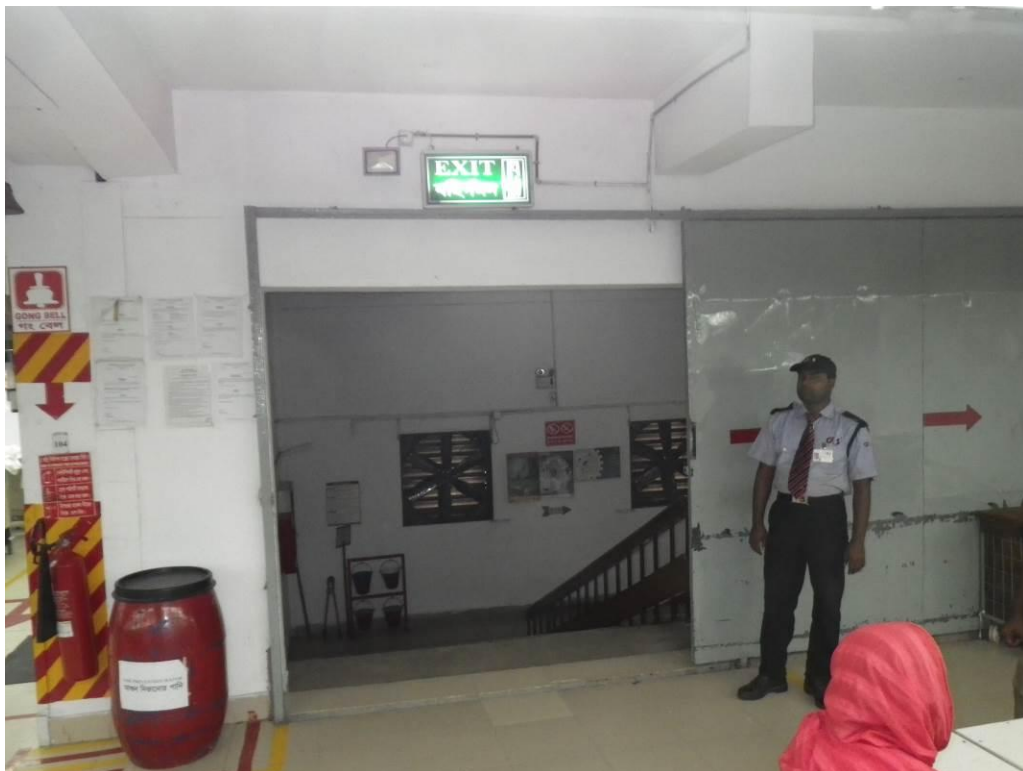


Photo 14 – Lockable gates at exit stairs (typical)



Photo 15 – Storage located in exit stair



Photo 16 – Non-fire life safety equipment located in exit stair (HVAC fans)



Photo 17 – Handrails provided on inside of exit stair only (typical)



Photo 18 – Single-station smoke alarm (typical)



Photo 19 – Smoke alarm missing from base



Photo 20 – Smoke alarm located well below the ceiling



Photo 21 – Exit sign not illuminated