

INITIAL FIRE SAFETY INSPECTION REPORT

Karnaphuli Sportswear Industries Ltd. (Extension)

RSC ID: 25961

GPS Coordinates: 22.299224876949722, 91.77363006646702

Plot # 09-20, Sector # 07, Chattogram Export Processing Zone, Chattogram, Bangladesh.

Other Factories: KSL Karnaphuli sportswear Limited (ID-11985)



Inspected By: Md. Golam Kibria & Md. Tanvir Rahman

Date: 23-Jan-2025

Fire Safety Inspection Report

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Address: Plot # 09-20, Sector # 07, Chattogram Export Processing Zone, Chattogram, Bangladesh.

Introduction:

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Karnaphuli Sportswear Industries Ltd. (Extension) complex was surveyed for fire safety on **23-Jan-2025** by The RSC Inspection Team. The purpose of the survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the RSC. The scope of this initial fire safety inspection was limited to the review and identification of major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

Limitations

The information in this fire safety inspection report was obtained during a visit to the facility and during interviews with local factory management. It has not been possible to provide independent verification for all the information and data collected, and, therefore, The RSC cannot accept general responsibility for omissions or errors arising from inaccuracies in this report from the information obtained.

The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations as stated in this report will eliminate all hazards, risks or exposures or that hazards, risks or exposures not referred to in this report do not exist. Compliance with the findings and recommendations stated in this report does not relieve the factory owner from obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

General Factory Information						
SL No	Building Name	Building Construction Period	Approval Date & Authority	Occupied	Structure type & Floor area	Construction Category
1	KSL-3 Building (extension) KSL-3 Building (OLD)	(Aug-1997 to Oct-1998) Old portion and (Jan 2022 to Jan-2023) Extension portion	07-Aug-1997 for Old portion by BEPZA 01-Jan-2022 for extension portion by BEPZA	November 1998(Old) & September 2023 (Extension)	RCC Old (G+3), New (G+5) Total area 203,180 sqft & per floor 40,160 sqft	Old Portion-Existing Extension Portion-New
2	Kitchen & Canteen Building	Mar-2023 to Jan-2024	25-Feb-2023 by BEPZA	Feb-24	RCC (G+4) Total Area: 54325 sqft per floor 11600 sqft	New
3	Gas Generator House	Nov-2007 to April-2009	27-Jun-2007 by BEPZA	Aug-09	RCC (G+1) Total Area: 6070 sqft	Existing
4	Pump House	July-1998 to Dec-1998	Applied for the approval from BEPZA	Dec-98	RCC wall with Steel shed (single storied) Total Area: 112 sqft	Existing

5	RO plant-03	Jan-2010 to Jun-2010	Applied for the approval from BEPZA	Jul-10	Steel (single storied) Total Area: 363 sqft	Existing
6	Garbage shed	Jan-2024 to Jun 2024	Applied for the approval from BEPZA	Jul-24	Steel (single storied) Total Area: 4000 sqft	New
7	Chemical shed	Jan-2024 to Jun 2024	Applied for the approval from BEPZA	Jul-24	Steel (single storied) Total Area: 516 sqft	New
8	Garbage sorting area	Jan-2024 to Jun 2024	Applied for the approval from BEPZA	Jul-24	Steel (single storied) Total Area: 360 sqft	New
9	Security Post & Fire Command Station-2	July-1998 to Dec-1998	Applied for the approval from BEPZA	Dec-98	Steel (Single Storied) Area: 230 sqft	Existing

10	Connecting bridge	July-1998 to Dec-1998	Applied for the approval from BEPZA	Dec-98	Steel Total Area: 709 sqft	Existing
11	Fire Pump House (west side)	July-1998 to Dec-1998	Applied for the approval from BEPZA	Dec-98	Steel (single storied) Total Area: 355 sqft	Existing
12	Prayers Room	Jan-2024 to Jun 2024	Applied for the approval from BEPZA	Jul-24	Steel (single storied) Total Area: 578 sqft	New
13	Fire Pump House (Positive suction)	Jan-2024 to Jun 2024	Applied for the approval from BEPZA	Jul-24	Steel (single storied) Total Area: 1225 sqft	New
14	Kitchen North Toilets.	Jan-2024 to Jun 2024	Applied for the approval from BEPZA	Jul-24	RCC (single storied) Total Area: 200 sqft	New

Points of contact:

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Findings & Recommendations :

Table 1 summarize the fire safety non-compliant issues identified during the inspection. Recommendations have been provided to address each issue with specific remediation timeline. An implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for review.

Table-1:

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	Elevator shafts are directly open into the inside of exit enclosure. Located: Exit stair-1 and 2 of KSL-3 and Stai- 2 of Kitchen & Canteen Building.	Modify the elevator shaft as per the RSC Technical Guideline (Standard) V1-6.14.3. An exit stairway shall not be built around a lift shaft unless both of them are located in a smoke proof enclosure and made of a material with fire resistance rating required for the type of construction of smoke proof enclosure.	Within 6 months
 				

F-2	Fire Rated Construction	Elevator shafts are directly open into the inside the floors which is not separated by fire rated doors. Also no credible documents of lift doors were found during the inspection. Located: KSL-3 Building and Kitchen & Canteen Building.	Elevator shaft shall be separated from production area by 2 hours fire rated construction and opening protective	Within 6 months
 				

F-3	Fire Rated Construction	Hazardous materials / Chemical storage area on ground floor is not separated by fire-rated construction (openings, non-rated doors, penetrations). Location: Chemical Shed, Garbage Shed.	Separate the hazardous materials / chemical storage area by a minimum 2-hr fire-rated construction. Seal and/or protect all openings to maintain the required fire separations.	Within 3 months
 				
F-4	Fire Rated Construction	MCD store is not separated from the production floor due to cable penetration at the ground floor of KSL-3 building. Location: Ground floor of KSL-3 Building.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months



F-5	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: 2nd, 3rd, & 4th floor of KSL-3 Building.	Provide defined storage areas and limit the storage arrangement as follows: Maximum height of 2.45 m and maximum area of 23 m² and is separated by a minimum 3.0 m (10ft) from other storage areas and they do not exceed 10 percent of the building area of the story in which they occur. or, If sprinkler protected, Maximum height 12 ft (3.66 m) and maximum area of 1000 ft² (93 m²) and separated by at least 25 ft (7.62 m) and does not constitute more than 10 percent of the building area or 4000 ft² (372 m²) of the sprinklered area, whichever is greater. or, Enclose the storage area from the surrounding occupancy with a minimum 1 hour construction.	Within 3 months
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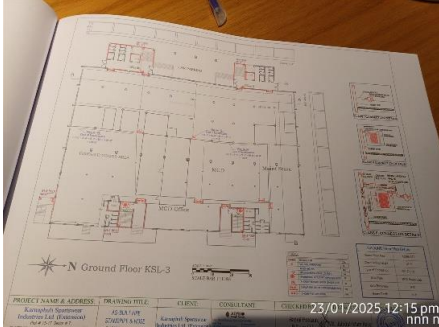


F-6	Fire Rated Construction	Unsealed penetrations has been observed in the fire rated ceiling assemblies due to expansion joint, plumbing pipe, cable penetration. Location: KSL-3 Building, Kitchen & Canteen Building, and Gas Generator House.	Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation at least by 3-hr. The used sealer shall be 3rd party certified and installation shall be as per manufacturer's datasheet. Or Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required.	Within 3 months
 The middle row of the table contains three photographs. The first photo on the left shows a close-up of a hole in a dark, textured ceiling with a green cable running through it. The middle photo shows a red fire door in a hallway with a green 'EXIT' sign above it. The third photo on the right shows a hallway with a yellow arrow pointing to a ceiling vent. All three photos have a timestamp '23/01/2025 12:54 pm' and 'nnn n' in the bottom right corner.				
F-7	Fire Rated Construction	The required fire separation distance in between KSL-3 Building and Kitchen & Canteen Building as well as KSL-3 Building and Generator House Building doesn't comply with the requirements of BNBC 2020.	The exterior walls shall have a fire resistance and opening protection as specified in BNBC 2020 Part 3 Table 3.2.2 & 3.2.3 and BNBC 2020 Part 3 Section 2.4.1.3.	Within 6 months



F-8	Means of egress	The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction and opening protective. The factory has installed fire rated doors to separate the exit stairs which need details verification. Also the penetrations are found in the rated wall of stair enclosure. Locations: KSL-3 Building, Canteen and Kitchen Building, Gas Generator House.	Stair shall be enclosed with a minimum 2-hr fire-rated construction. Seal all unprotected openings and provide minimum 1.5-hr fire rated doors to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing, positive latching and that they are provided with fire exit (panic) hardware where serving production floors. Penetrations into and through an exit enclosure shall be prohibited with the exception of required exit doors, sprinkler piping, standpipes, electrical raceway for fire alarm equipment, and electrical conduit serving the exit enclosure.	Within 3 months
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F-9	Means of egress	Dedicated storage rooms (Fabric store, finished goods store, maintenance store) at ground floor of KSL-3 building and (IDLE Machine Store, Admin Store) at 4th floor Kitchen and Canteen building are found during the inspection, and no vestibules are found with exit enclosure as discharges from the storages directly to the stair enclosures. Locations: Ground Floor of KSL-3 Building, 4th Floor of Canteen and Kitchen Building.	Openings from exit enclosures to storage areas, basements, transformer rooms, generator rooms, boiler rooms, and similar normally unoccupied spaces shall be provided with vestibules as per RSC Technical Guideline (Standard) V1.0, Section: 6.14.3 Provide a minimum 1.5 hr. fire rated door on the exit stair side and a minimum 0.75- hr. fire rated door on the storage room side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure. The minimum width for vestibules shall not be less than 1.1 m and length 1.8 m.	Within 4 months
  				

F-10	Means of egress	Exit discharge path from KSL-3 building, Kitchen & Canteen building, and Prayer room (shed) were not protected from the opening of other occupancies. Location: KSL-3 building, Kitchen & Canteen building, and Prayer room (shed).	Ensure that the passageway is fire rated by 2-hour including protection of unprotected opening by minimum 1.5 hour. An egress court serving as a portion of the exit discharge shall be open to the sky or provided with a fire resistance rated enclosure the same as the exit enclosure. Egress courts less than 3050 mm (10 ft) in width (as measured from the building and the adjacent property line) shall be provided with walls having a 1-hr fire resistance rated construction for a distance of 3050 mm (10 ft) above the floor of the court.	Within 3 months
 				

F-11	Means of egress	Building did not have stair designation sign and occupant load signs at required locations. Location: KSL-3 and Kitchen & Canteen Building.	Provide stair designation sign and occupant load at each floor entrance from the stair to the floor in English and Bengali. Signs shall indicate the name of the stair and the floor level. Signs shall be posted adjacent to the door.	Within 1 month
				
F-12	Means of egress	Stair width of the Gas Generator house building is less than 35 inch. Location: Gas Generator House.	In existing construction, stairs shall have a minimum width of 0.9 m (35 in.).	Within 3 months
				

F-13	Means of egress	Only a single exit is provided at 1st floor Gas Generator house building where the travel distance exceeds 75 feet.	Provide additional exit from the building. The number of means of egress from any floor, story or portion thereof shall not be less than 2 except where a single exit is permitted by 6.6.2 of, a single means of egress is permitted by 6.6.5 or where a greater number is required by 6.6.3 of RSC Technical Guidelines Standard V1.0. Also ensure arrangement of exits as per 6.6.6 of RSC Technical Guidelines Standard V1.0.	Within 3 months
				
F-14	Means of egress	Handrails have not been provided on both sides of exit stairs at Generator Building. Exit stair-3, 4 at ground floor of KSL-3 Building is more than 2.2 meter where intermediate handrail was not provided. Location: Generator Building, KSL-3 Building, Ground Floor.	Provide handrails on both sides of the exit stair. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.).	Within 3 months

 				
F-15	Means of egress	Parapets or guards are provided in occupied roof which is less than 1067mm (42 inch). Location: Roof of KSL-3 Building and Generator House.	Provide parapets or guards with a minimum height of 1067mm (42 inch.).	Within 1 month
 				
F-16	Means of egress	The evacuation maps are not updated as per floor layout. Location: All Building.	Updated fire evacuation maps shall be posted at the entrance to each exit stair.	Within 3 months

 				
F-17	Means of egress	Exit-5 serving fire door width was found less than 39 inch during the inspection at ground floor of KSL-3	Provide minimum door widths of 1 m (39 in.).	Within 1 month
F-18	Means of egress	Aisles marking has not been provided on floor properly. Location: Ground and 4th floor of Kitchen & Canteen Building.	Aisles shall be provided with a minimum unobstructed clear width of 0.9 m (36 in.).	Within 1 month



F-19	Egress Lighting	Exit signs are found with less illumination than required at few exits during the inspection. Also, directional signs are found inadequate through the means of egress where direction of the path of travel to an exit has changed. Location: All Building.	Lighted exit signs shall be placed at entrance to an exit. Additional directional exit signs shall be placed throughout the facility anywhere the continuation of the egress is not obvious. Lighted exit signs shall be provided with either battery backup or uninterruptable power supply systems and shall be continuously illuminated.	Within 3 months
 				
F-20	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Few of those are found non-functional.	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.	Within 1 month

				
F-21	Egress Lighting ITM	Inspection, testing, and maintenance for the emergency lighting system were not in accordance with The RSC Technical Guidelines (Standard).	Inspect, test and maintain the emergency lighting system in the accordance with The RSC Technical Guidelines (Standard) and keep written records on-site.	Within 3 months
F-22	Fire Alarm & Detection system	Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard). Location: All Building.	Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the buildings in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.	Design Review within 2 months and installation within 4 months



F-23	ITM of Fire Alarm & Detection system	Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
F-24	Fire Protection System (Standpipe and Hose System)	The highest occupied floor of KSL-3 Building and Kitchen & Canteen Building from the grade level are 62 feet 7 inch and 54 feet 5 inch respectively. So class III standpipe and hose system is required for the entire building and is found installed during the inspection. Standpipe and hose system with fire pump installation require detailed review to confirm compliance with NFPA 20 and RSC Technical Guideline (Standard).	Submit the standpipe and hose system drawing and documents to RSC for review. Once reviewed, install or modify the standpipe and hose system throughout the building in accordance with RSC Technical Guideline (Standard) and NFPA 14, 20, 22, and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe and hose system.	Design Review within 2 months and installation within 4 months.



F-25	Fire Protection System (ITM of fire pump)	Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 month (after installation)
F-26	Fire Protection System (ITM of Standpipe and Hose System)	Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 month (after installation)
F-27	ITM of Fire Extinguishers	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and The RSC Technical Guidelines (Standard).	Within 3 months