

INITIAL FIRE SAFETY INSPECTION REPORT

Kaixi Lingerie Bangladesh Co Ltd

RSC ID: 26170

GPS Coordinates: 22.7415134, 91.4713959

Plot# 183-188 and 189A-193, BEPZA Economic Zone -01, Mirsora, Chattogram.

Other Factories: N/A



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

Date: 21 & 22-April-2025

Fire Safety Inspection Report

Kaixi Lingerie Bangladesh Co Ltd

Plot# 183-188 and 189A-193, BEPZA Economic Zone -01,

Introduction:

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Kaixi Lingerie Bangladesh Co Ltd complex was surveyed for fire safety on **21 & 22-April-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	Main production building	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	Steel (G+3) Total area 3,99,076 sqft & per floor 99,769 sqft	New
2	Security Building-01	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (single storied) Total Area: 378 sqft	New
3	Fire Pump room	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (single storied) Total Area: 285 sqft	New
4	Substation & Transformer Room	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC Single storied Total Area: 1039 sqft	New

5	Generator Room	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC Single storied Total Area: 867 sqft	New
6	Solar Substation&Maitance Building	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (single storied) Total Area: 653 sqft	New
7	Security Building -2	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (single storied) Total Area:168 sqft	New
8	Canteen & Childcare	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (single storied) Total Area: 521 sqft	New
9	Medical Room (Male& Female)	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (Single Storied) Area: 521 sqft	New
10	Wastage Room	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (Single Storied) Area: 521 sqft	New

11	Compressor Room	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	RCC (single storied) Total Area: 525 sqft	New
12	Smoking zone	Dec-2022-Oct-2023	1-Nov-23	1-Nov-23	Steel (single storied) Total Area: 144 sqft	New

Points of contact:

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Findings & Recommendations :

Table 1 summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue. 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:

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-01	Fire Rated Construction	The main structural element of the four storey main production building by non-rated steel & building height (average height) is found 52 feet 7 inch (16 meter). Steel members are found in exposed condition without any fire protection. Location: Main Production Building.	Assess structural fire protection requirements of steel buildings (unprotected non-combustible construction type) according to BNBC 2020. The construction type shall confirm to be in accordance with BNBC 2020 Part-3, Table 3.1.7. Ensure fire resistive rated construction following Table 3.3.1 (a) Part 3 Section-3, Table 3.2.2 and Table 3.2.3 Part 3 Section 2 and Table 4.1.1 from BNBC 2020 Part 4 Section 1. Provide design philosophy to determine the construction type as per BNBC 2020. If any construction rating requires, Consult a qualified fire protection engineer to achieve the require fire rating. Submit the proposed drawing/design to RSC for review. Once reviewed, install passive fire protection as per reviewed design.	Within 6 Months
  				

F-02	Fire Rated Construction	The required fire separation distances do not comply with the requirements of BNBC 2020. Location: Main Production Building, Acillary Structures.	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-03	Fire Rated Construction	Bonded warehouse at ground floor is not separated from the production area and office area due to non-rated opening and penetration. Also the finished goods storage and accessories storage on 1st floor is not separated by fire rated construction and opening protective from production areas as per guideline. Location: Bonded Warehouse at Ground Floor and finished Goods Storage at 1st Floor.	Rooms used for storage of combustible materials shall be separated from the surrounding occupancy with a minimum 1 hour construction in accordance with section 3.4.2.1.5 of RSC Technical Guideline (Standard).	Within 3 Months

 				
F-04	Fire Rated Construction	Elevator shafts open directly into the exit enclosure, which is a violation of RSC Technical Guidelines (Standard) 6.14.3. Location: All floor of Production Building at stair-8	Ensure minimum 1.5-hr fire rating for the doors of elevator shafts otherwise close the shafts area with 2-hr fire rated construction barrier and 1.5-hr fire rated doors. So, re-arrange the facility to provide separate enclosure for lifts. If not possible anyway provide a minimum 2-hr fire-rated elevator shaft with listed fire rated lift landing door to separate from each floor level. Factory shall ensure that, all the design, datasheet, certificate, and proposed drawing of installation has been reviewed from the RSC prior to install the passive fire protection system (If required). Factory is recommended to follow RSC published "SUPPLEMENTARY PAPER ON REMEDIATION GUIDANCE ELEVATOR OR LIFT SHAFT OPENING IN EXIT ENCLOSURES" for different solutions.	Within 3 Months

 				
F-05	Fire Rated Construction	Floor to floor penetration due to plumbing pipe and electric cable riser are found in production building which were not separated by fire rated construction or fire rated sealant. Location: All Floor at Main Production Building.	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. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 Months
 				

F-06	Fire Rated Construction	Dining area is not separated from adjacent occupancies with fire rated assemblies. Location: All Floor of Main Production Building.	To classify the occupancy as I4, it's necessary to limit the occupant load to 300 or below as I3 (more than 300) is not permitted adjacent to production. Ensure required fire separation and opening protection as per BNBC table 3.2.1. Additionally, ensure that there are required direct exits to the stair enclosure.	Within 3 Months
 				

F-07	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: All Floor of Main Production 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
 				

F-08	Means of Egress	Dedicated storage room (Bonded warehouse, Finished goods store) is found on ground floor and 1st floor during the inspection, and no vestibules were found with exit stair as discharges from the storage room is directly to the exit stair enclosure. Location: Ground Floor and 1st Floor of Main Production Building.	Openings from exit enclosure to Storage areas/ basements/ transformer rooms/ generator rooms/ boiler rooms and similar normally unoccupied spaces shall be provided with a vestibule with fire rated construction and openings in accordance with section 6.14.3 of RSC Technical Guidelines (Standard)¹ V1.0. . Provide a 1.5 hr. fire rated door on the exit stair side and a 1-hr. fire rated door on the Store, generator, sub-station room side . Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure as per RSC Technical Guidelines (Standard)¹ V1.0. section 6.14.3. The minimum width for vestibules shall not be less than 1.1m and length 1.8m.	Within 3 Months
 				

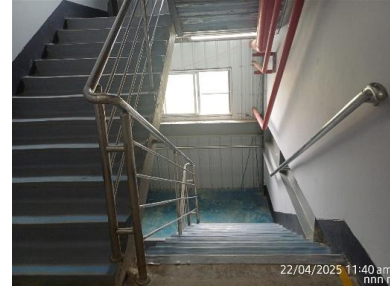
F-09	Means of Egress	The exit stairs are not separated from work areas, and other spaces due to non functional fire doors, openings and penetrations with operational areas. Location: All the stairs of Main Production Building.	The exit stair enclosure shall be provided with a minimum 1-hr fire resistance rating for buildings with 3 or fewer stories and a minimum of 2- hr. fire resistance rating for buildings 4 or more stories. Provide 1-hr. fire rated door and seal all penetrations and openings by 1 hr. fire rated fire rated barrier construction for building with 3 or fewer stories. Provide 1.5 hr. fire rated door and seal all penetrations and openings by 2 hr. fire rated fire rated barrier construction for building with 4 or more stories in accordance with section 6.3.1.2 of RSC Technical Guidelines (Standard)¹ V1.0. Provide a fire-resistive rated assembly between the exterior exit stairs and the building up to 10 ft. beyond the end of the stair to achieve the required separation. The rated assembly shall be approved and/or designed by a qualified fire protection engineer. 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.	Within 3 Months
				

F-10	Means of Egress	Building does not have occupant load signs at required locations on all floors. Location: Main Production Building	Post the occupant load for every assembly and production floor in a facility in a conspicuous space near the main exit or exit access doorway for the space in accordance with RSC Technical Guidelines (Standard) ¹ V1.0 Section 6.4.4.	Within 1 Month
F-11	Means of Egress	Building does not have stair/floor level designation signs at required locations on all floors. Location: Main Production Building	Provide stair designation sign at 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 in accordance with RSC Technical Guidelines (Standard) ¹ V1.0 Section 6.9.3.	Within 1 Month
F-12	Means of Egress	Aisles mark is found less than 36 inch at bonded warehouse of ground floor and sewing section on 2nd floor of main production building.	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 1 Month
 				

F-13	Means of Egress	Width of stairs are found less than 1.5 m (60 in.) Location: All the Stairs of Main Production Building	Stairs shall have a minimum width of 1.5 m (60 in.) for New building.	Within 3 Months
				
F-14	Means of Egress	Doors in a means of egress was found less than 1 m (39 in.). Location: Ground Floor of Main Production Building.	Doors in a means of egress shall have a minimum width of 1 m (39 in.) as per RSC Technical Guideline (Standard) section of 6.5.6	Within 3 Months



F-15	Egress Lighting	Illumination level of exit signs and directional signs are found inadequate. Also directional signs are not provided adequately where direction of the path of travel to an exit has changed. Location: All Floor of Main Production Building, Ancillary Buildings.	Lighted exit signs shall be placed at entrance to an exit. Additionally, 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 as per standard.	Within 2 Months
 				
F-16	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: All Floor of the Main Production Building.	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 2 Months



F-17	Egress Lighting	Manual on-off switch is provided for emergency lighting / exit signage units. Location: All Floor of the Main Production Building.	Remove manual on/off switches from emergency lighting / exit signage units to prevent them from being switched off.	Within 1 Month
 				
F-18	ITM	Fire drill are not performed as required.	Fire drills shall be conducted on a monthly basis as outlined in BNBC 2020 Part 4 Appendix A.	Within 3 Months

F-19	ITM	The required no smoking signs are not present in the factory.	Smoking is prohibited in any garment factory building or separate storage building. Signs shall be posted in Bengali and English at all building entrances. If the factory creates a designated smoking area outside the building, information of these areas will be posted on the signs. Smoking sign shall post in accordance with section 13.5 of of RSC Technical Guideline (Standard).	Within 1 Month
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F-20	Fire Alarm & Detection System (FADS)	The fire alarm and detection system has been installed, which requires a detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard). Location: All Buildings.	Submit the proposed automatic fire alarm and detection system drawing and documents by 3rd party certified/listed products to RSC for review. Once the design is reviewed, install/modify the fire alarm and detection system throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 72. After installation/modification the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.	Design within 2 Months and Modification/Installation within 4 Months
  				
F-21	Inspection, Testing and Maintenance (ITM) of FADS	Inspection, testing and maintenance for the fire detection and alarm system was not in accordance with standard.	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Within 1 Month (after installation)

F-22	Fire Suppression System (SUPS)	The height of highest occupied floor of main production building from the grade level is 36 feet 2 inch. So class-III standpipe system is required for the entire building and was found installed during the inspection. Also the factory has installed the sprinkler system throughout the 4 storied building. Standpipe and hose system, sprinkler system and fire pump installation require a detailed review to ensure compliance with NFPA-13, 14, 20, and RSC Technical Guidelines (Standard).	Submit the Standpipe and hose system, sprinkler system and fire pump 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-13, 14, 20. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe and hose system.	Design within 2 Months and Modification/ Installation within 4 Months
				
F-23	Inspection, Testing and Maintenance (ITM) of SUPS	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 25.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 1 Month (after installation)
F-24	Inspection, Testing and Maintenance (ITM) of SUPS	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 25.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 1 Month (after installation)

F-25	Inspection, Testing and Maintenance (ITM) of SUPS	Inspection, testing and maintenance of the sprinkler system is not in accordance with NFPA 25.	Inspect, test and maintain the sprinkler system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 1 Month (after installation)
F-26	Inspection, Testing and Maintenance (ITM) of Emergency light and Exit Sign	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with the RSC standard.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with the RSC standard. Keep written records on-site.	Within 3 Months
F-27	Inspection, Testing and Maintenance (ITM) of Fire Extinguisher	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 on- site, in accordance with NFPA 10 and RSC standards.	Within 2 Months