

INITIAL FIRE SAFETY INSPECTION REPORT

Thanbee Print World Ltd. and Parkway Packaging & Printing PLC

RSC ID: 10776

Geographical Coordinates: 23.978112,90.304102

Address: Sardagonj, Kashimpur, Gazipur

Other Factories: None



Inspected By: Ahammad Kabir, Muntasir Ahmad Nasif & Al-Shahriar Shovon

Date: 20-Aug-2025

General Factory Information:

Thanbee Print World Ltd. and Parkway Packaging & Printing PLC

Introduction:

The **Thanbee Print World Ltd. and Parkway Packaging & Printing PLC** complex was surveyed for fire safety on **20-Aug-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

SI No	Building Name & Description	Construction History	Remarks
1	Building-1: Production Building (Block-A) 3 storied (G+2) building including steel roof shed and 1 mezzanine Total Area: Approximately 89,327 Sft. <i>Building 1, building 2, building 3, building 4 & building 5 are the same fire compartment. The building is structurally separated from building 2, 6 & 7. The building 1 is fire separated from the buildings 6 & 7. The south exit discharge path of building 1 is shared with building 6 north exit and southwest exit discharge path of building 1 is shared with building 7 east exit and northwest exit of building 6. These exit discharge paths of building 1 is required to be separated from building 6 & 7. Building 2, building 1 and building 3 share the northwest exit for the evacuation.</i>	Construction period: January 2007 to April 2010. Date of first Operation: May 2010. Building Approval: 8 April 2008 by LGED, Gazipur Sadar	Existing
2	Building-2: Office Building With WTP & Generator (Block-B & D) 5 storied (G+4) RCC building Total Approx Area: 27,100 Sft. <i>Building 1, building 2, building 3, building 4 & building 5 are the same fire compartment. The building is structurally separated from building 1, 3, 4 & 5. However, building 2, building 1 and building 3 share the northwest exit for the evacuation.</i>	Construction period: January 2007 to April 2010. Date of first Operation: May 2010. Building Approval: 8 April 2008 by LGED, Gazipur Sadar	Existing
3	Building-3: Utility Building (BLOCK-C) 3 storied (G+1) RCC building Total Approx Area: 7251 Sft. <i>Building 1, building 2, building 3, building 4 & building 5 are the same fire compartment. The building is structurally separated from building 2. However, building 2, building 1 and building 3 share the northwest exit for the evacuation.</i>	Construction period: January 2007 to April 2010. Date of first Operation: May 2010. Building Approval: 8 April 2008 by LGED, Gazipur Sadar	Existing

4	Building-4: Bandhan Building (BLOCK-E) 2 storied (G+1) RCC building Total Approx Area: 1377 sft <i>Building 1, building 2, building 3, building 4 & building 5 are the same fire compartment. The building is structurally separated from building 2 & 5. However, building 4 is not fire rated separated from the building 2 due to non rated opening at the north stair of building 2.</i>	Construction period: January 2007 to April 2010. Date of first Operation: May 2010. Building Approval: 8 April 2008 by LGED, Gazipur Sadar	Existing
5	Building-5: RMS Room Single storied masonry building Total Approx Area: 350 sqft Building 1, building 2, building 3, building 4 & building 5 are the same fire compartment. The building is structurally separated from building 2 & 4. Building 5 has unprotected opening.	Construction period: March 2009 to May 2009 Date of first Operation: May 2009 Building Approval: 8 April 2008 by LGED, Gazipur Sadar	Existing
6	Building-6: Storage Shed-1 (BLOCK-F) Single storied steel shed. Total Approx Area: 8297 sqft <i>The building is structurally separated from building 1, 2, & 7. The building 6 is fire separated from the buildings 1 but not separated from building 7. The south exit discharge path of building 1 is shared with building 6 north exit. The exit discharge path of building 1 is required to be separated from building 6.</i>	Construction period: March 2021 to April 2022 Date of first Operation: May 2022 Building Approval: 27 May 2013 by Gazipur Pourosova	Interim

7	Building-7: Storage Shed-2 (BLOCK-G) Single storied steel shed Total Approx Area: 8973 sqft <i>The building is structurally separated from building 1, 2 & 6. The building 7 is fire separated from the building 1 but not from the building 6. The southwest exit discharge path of building 1 is shared with east exit of building 7 and northwest exit of building 6. This exit discharge path of building 1 is required to be separated from building 7.</i>	Construction period: March 2021 to April 2022 Date of first Operation: May 2022 Building Approval: 27 May 2013 by Gazipur Pourosova	Interim
8	Building-8: Guard Room Single storied masonry Building Total Approx Area: 68 sqft	Construction period: January 2007 to April 2010 Date of first Operation: May 2010 Building Approval: 27 May 2013 by Gazipur Pourosova	Existing
9	Building-9: Thanbee Print World Extension Building The structure is a 9-storied (B+G+8) RCC building with one basement and three mezzanine floors. Although the structure has 8 stories with three mezzanines on the ground floor, the gross area of the mezzanines (9,189 sft) exceeds one-third of the corresponding ground floor area (21,257 sft). Therefore, the mezzanines are considered as a full floor (1st floor), making the building officially classified as a 9-storied building instead of 8-storied. Total Area: Approximately 2,06,795 Sft.	Construction period: March-2014 to September-2017 Date of first Operation: October-2017 Building Approval: 09-February-2013 (From LGED Gazipur Sadar) DIFE: 13-January-2025 (As-Built Layout Plan)	Interim
10	Building-10: ETP Building 4-storied (G+3) RCC building with ETP tank on ground floor Total Approx Area: 9,746 Sft.	Construction period: May-2014 to August-2017 Date of first Operation: August-2017 Building Approval: 09-February-2013 (From LGED Gazipur Sadar) DIFE: 13-January-2025 (As-Built)	Interim

11	Building-11: Gate & RMS Room Single storied RC building Total Approx Area: 315 sqft	Construction period: May 2020 to Feb 2021 Date of first Operation: Mar 2021 Building Approval: Feb 2013 by Gazipur Pourosova	Interim
12	Building-12: Wastage Store Shed Single storied steel shed Total Approx Area: 262.4 sqft	Construction period: Oct 2017 to Dec 2017 Date of first Operation: Dec 2017 Building Approval: N/A	Interim
13	Building-13: DIESEL STORAGE Room Single storied masonry shed Total Approx Area: 350 sqft	Construction period: Oct 2017 to Dec 2017 Date of first Operation: Dec 2017 Building Approval: 27 May 2013	Interim

Note: Building-10: ETP Building has only one dedicated exit stair and the building is using stair-01 of Building-09 through a connecting corridor as secondary exit stair.

Factory Address: Sardagonj, Kashimpur, Gazipur

Other RSC ID in the premises: None.

Points of contact:

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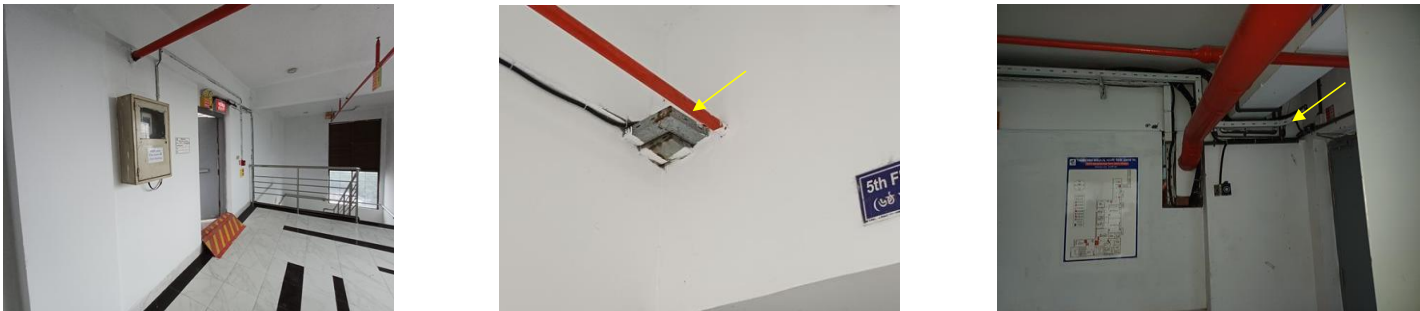


Findings & Recommendations :

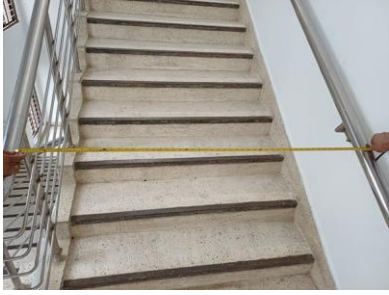
Table 1 (for Building-9: Thanbee Print World Extension Building & Building-10: ETP Building) & Table-2 (for Building-1, 2, 3, 4, 5, 6, 7, 8, 12 & 13.) summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue. An implementation schedule shall be developed by the factory to remediate each of the similar types of findings throughout the premises. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for approval.

Table-1: Finding & recommendation for Building-9: Thanbee Print World Extension Building & Building-10: ETP Building

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Means of Egress	The exit stair enclosures are not separated from work areas and other spaces on each floor by fire-rated construction. Location: Building-9 & Building-10.	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. Keep proper datasheet & certifications for installed fire doors & accessories on-site for verification. The clearance under the bottom of a door shall be a maximum of 3/4 in. (19 mm).	Within 3 months
				

F-2	Means of Egress	Electrical panels & power cable raceway are located in the exit stair enclosures. Location: Stair-2 & Stair-3 of Building-09.	Remove and re-locate all Electrical panels from exit stair enclosures. No other penetration into and through the exit enclosure except for fire alarm equipment electrical raceway, required exit doors, sprinkler piping, standpipes, and electrical conduit serving the exit enclosure is permitted in accordance with section 6.14.4 of RSC Technical Guidelines (Standard)¹ V1.0. So, relocate the electrical wires/raceways to somewhere else avoiding the exit enclosure, and seal the created unprotected openings with a minimum of 1.5 hours listed/certified fire-rated materials. Installation shall be as per manufacturer published installation guideline and the certification authority guideline to ensure the fire-rating. Or, Seal the penetration by 2-hr masonry construction.	Within 3 months
				

F-3	Means of Egress	Exit stair(s) terminates the occupants inside the building which does not comply with section 6.17 of RSC Technical Guidelines (Standard)¹ V1.0. Location: Ground floor, Stair-2 of Building-09.	Exits shall discharge directly to the exterior of the building unless meeting the requirements of 6.17.2 or 6.17.3 as per RSC Technical Guidelines (Standard)¹ V1.0.	Within 3 months
 				
F-4	Means of Egress	Aisles were found missing on several locations throughout the building. Location: Building-9.	Provide minimum aisle widths of 36-in. Aisles mark shall be clearly visible.	Within 1 month
 				

F-5	Means of Egress	Stair clear width was found less than 60 in. [Available Stair Width: 52 in., 43 in. & 54 in. respectively]. Location: Stair-1 & basement floor stair-02 of Building-09 and Stair-04 of Building-10.	Stairs shall have a minimum clear width of 60 in. for all industrial occupancies as per RSC Technical Guideline (Standard) section of 6.5.6	Within 3 months
 				
F-6	Means of Egress	Headroom measured less than the 80 inch. [Available Headroom: 76 inch.]. Location: 3rd floor of Building-09.	All means of egress shall have a minimum ceiling height of 2.3 m (7 ft 6 in.) with projections from the ceiling not less than 2.03 m (6 ft 8 in.). The minimum ceiling height shall be maintained for at least 2/3 of the space or room as long as the remaining area shall be not less than 2.03 m (6 ft 8 in.). Headroom on stairs shall not be less than 2.03 m (6 ft 8 in.) as per RSC Technical Guideline (Standard) section of 6.3.3.	Within 3 months
				

F-7	Means of egress	Exit stairs serve more than 5 stories and do not have required re-entry provisions on required floors. Location: Building-09.	Every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets RSC Technical Guidelines (Standard)¹ V1.0. Section 6.8.3.1.	Within 3 months
				
F-8	Means of egress	Means of egress are found uneven and are not uniformly slip-resistant. Location: North & East side of Building-09.	Walking surfaces shall be mostly level; however, shall not exceed a slope of 1 in 20 in the direction of travel unless meeting the requirements for ramps in 6.10 shall meet the requirements for RSC Technical Guidelines (Standard)¹ V1.0 Section 6.3.4.2 Walking surfaces, including stairway treads shall be uniformly slip resistant in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 6.3.6	Within 3 months
				

F-9	Means of Egress	Fire evacuation maps are not updated as per site condition. Location: Building-09.	Update the fire evacuation map and shall be posted at the entrance to each exit stair in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 13.3.	Within 1 month
				
F-10	Means of egress	Building does not have stair/floor level designation signs at required locations on all floors. Location: Building-09 & Building-10.	Provide stair designation sign 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-11	Means of egress	Illuminated exit sign not provided at exit. Location: Ground floor, Paper store of Building-09.	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 at all times. Exit Sign shall provide in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 6.11.	Within 1 month
				
F-12	Means of egress	Directional signs are not provided where direction of the path of travel to an exit has changed. Location: All floors of Building-09 & Building-10.	Illuminated directional signs shall be provided where there is a change in the direction for the path of travel and the direction to an exit is not obvious in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 6.11.3.	Within 1 month
				

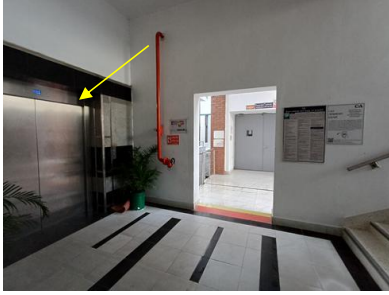
F-13	Means of egress	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: All floors of Building-09 & Building-10.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide 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. Illumination on means of egress shall meet in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 10.12.2.	Within 3 months
 				
F-14	Means of egress	Handrails are not provided on both sides of accessible roof exit stair. Location: Stair-3 of Building-09.	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.). Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.). Handrail shall construct in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 6.12.	Within 3 months

				
F-15	Means of egress	Guards are not provided on open side of means of egress components on the ground floor. Location: Beside stair-1 of Building-09.	Guards shall be provided at all open sides of means of egress that exceed 760 mm (30 in.) above the floor or finished ground below. Guards shall have a minimum height of 1067 mm (42 in.). Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.). Guard shall construct in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 6.12.	Within 3 months
				

F-16	Fire Rated Construction	The day-care room does not meet RSC Technical Guidelines (Standard)¹ V1.0. section 3.4.2.1.1. [Travel distance found approximately 82 feet]. Location: Ground floor of Building-09.	Day-care shall be located on the ground floor with a maximum travel distance of 9 m (30 ft) or located one story above level of exit discharge with direct access to an exit enclosure in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 3.4.2.1.1	Within 3 months
 				
F-17	Fire Rated Construction	Fire pump room was not directly accessible from the outside or not provided with an enclosed passageway. Location: Basement floor of Building-09.	Provide direct access from the outside or provide a 2-hr enclosed passageway from an enclosed stairway or exterior exit.	Within 3 months
				

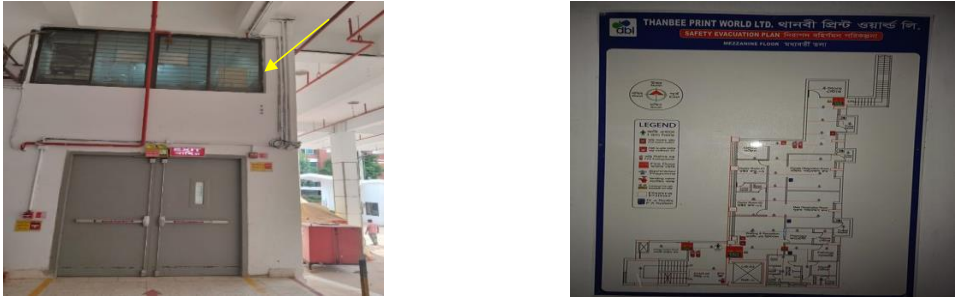
F-18	Fire Rated Construction	Rooms used for storage of combustible materials are not separated from the surrounding occupancy/areas due to non-functional door, unprotected openings etc. Location: Ground floor of Building-09.	Rooms used for storage of combustible materials shall be separated from the 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-19	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: 5th & 6th floor of Building-09.	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 a 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-20	Fire Rated Construction	Elevator shafts open directly into the exit enclosure, which doesn't comply with RSC Technical Guidelines (Standard), Section 6.14.3. Location: Stair-01 & Stair-02 of Building-09.	Provide a minimum 2-hr fire rated elevator shaft to separate it from stair enclosure. No discharge is accepted through elevator shaft. Seal all openings to maintain fire separations.	Within 3 months
 				
F-21	Fire Rated Construction	Penetrations through floor/ceiling assemblies are found unsealed due to BBT, Electrical cable, Plumbing pipe etc. Location: All floors of Building-09.	Seal all penetrations and openings in floor/ceiling assemblies by a listed through-penetration fire stop system tested in accordance with ASTM E814 or approved alternative standard to maintain minimum 3-hr. fire resistance rating. Installation shall be as per manufacturer published installation guideline and the certification authority guideline to ensure the fire-rating in accordance with section 4.7 of RSC Technical Guideline (Standard) Or, Provide a minimum 2-hr fire rated shaft to separate the penetration from each floor if required.	Within 3 months
   				

F-22	Fire Rated Construction	Chemical storage area are not properly separated by fire-rated construction from the production area. Location: 2nd, 3rd, 4th, 5th, 6th & 8th floor of Building-09.	Provide a 4-hour fire-rated construction barrier to separate the chemical store from the surrounding production areas. The 4-hour fire-resistive separation shall have no openings/ no unprotected openings therein and shall provide a fire resistance for at least four hour. Chemical stores shall comply with BNBC 2006, Part 3, Section 2.13. or, Ensure exempt amounts of chemical are located on chemical stores with other occupancy as per Table 3.2.7 (BNBC 2006)	Within 3 months
 				

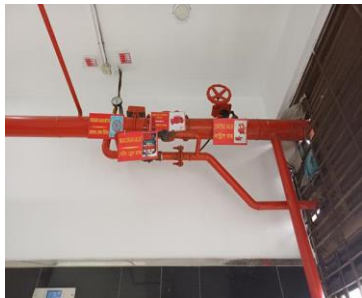
F-23	Fire Rated Construction	The assembly area (dining & prayer) is located on the same floor as the chemical storage, which is not permitted in accordance with BNBC 2006. Location: 8th floor of Building-09.	Remove the chemical storage or relocate the dining area to ensure compliance with BNBC 2006.	Within 3 months
 				
F-24	Fire Rated Construction	Dining (E4 occupancy) area is not properly separated from production area (G2 occupancy) with fire rated assemblies due to unprotected openings /penetrations. Location: 8th floor of Building-09.	Separate the dining area from other occupancies with 3-hr fire rated construction, provide minimum 3-hr. rated doors for the openings and seal the unprotected penetrations. Provide required exits that lead directly to the street or exit stairwell or leading to a corridor or open space.	Within 3 months
 				

F-25	Fire Rated Construction	Unprotected openings in the exterior wall in two consecutive floors lying within 1.5 m and vertical spread of fire is not restricted. Location: West side of Building-09.	Provide flame barriers as similar as sunshades or cornices or projected wall at least 750 mm from the external face of the exterior wall. The flame barrier shall have a fire resistance rating of not less than three-fourths hour. For Interim Building, BNBC 2006 Part III chapter 3 clause 3.1.7.2.	Within 6 months
				
F-26	Fire Rated Construction	As the mezzanine floor area exceeds one-third of the ground floor area, it is defined as a main floor (1st floor). No floor-to-floor fire separation has been provided between the ground floor and the 1st floor. Location: Building-09.	Provide minimum 3-hr floor-to-floor fire separation on every floors following table 3.3.1 of BNBC-2006.	Within 3 months
				

F-27	Fire Rated Construction	The required fire separation distance for Building-01 does not comply with the requirements of BNBC 2006. Location: All sides of Building-09.	The exterior walls shall have a fire resistance and opening protection as specified in BNBC 2006, Tables 3.2.2 and Part 3 Section 2.4.1.3.	Within 6 months
 				

F-28	Fire Alarm & Detection System (FADS)	The factory has installed a fire alarm and detection system that requires a detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard). Location: Building-9, Building-10 & Building-11.	Submit the fire alarm and detection system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the building 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 within 2 month and modification/ installation within 4 months
				
F-29	Inspection, Testing & Maintenance (Fire)	Inspection, testing and maintenance for the fire alarm & detection system is not in accordance with NFPA-72.	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and RSC Technical Guidelines (Standard) ¹ V1.0.	Within 1 month after installation

F-30	Fire Suppression System (SUPS)	The highest occupied floor of the Building-9 (Thanbee Print World Extension Building) is over 75 feet above grade, mandating a sprinkler system along with a class I standpipe. The factory has installed a sprinkler system with a class I standpipe, requiring a detailed review to ensure compliance with NFPA 13, 14, 20, 22, and 24 and RSC Technical Guidelines (Standard). Additionally, Building-10 (ETP Building) has only one dedicated exit stair and the building is using stair-01 of Building-09 through a connecting corridor as secondary exit stair which creates a single fire event. Therefore, installation of an automatic fire sprinkler system along with a class I standpipe is also required for Building-10 (ETP Building). Location: Building-9 & Building-10.	Submit the fire Suppression System (fire pump, standpipe and sprinkler) design to RSC for review. Once the design is reviewed, install and modify the fire Suppression System throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 13, 14, 20, 22 and 24. 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/modification within 4 months
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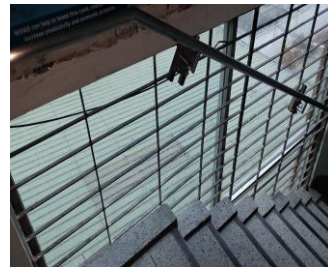




F-31	Inspection, Testing & Maintenance (Fire)	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 25.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 25 and RSC Technical Guidelines (Standard) ¹ V1.0.	Within 1 month after installation
F-32	Inspection, Testing & Maintenance (Fire)	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 Technical Guidelines (Standard) ¹ V1.0.	Within 1 month after installation
F-33	Inspection, Testing & Maintenance (Fire)	Inspection, testing and maintenance of the automatic sprinkler system is not in accordance with NFPA 25.	Inspect, test and maintain the automatic sprinkler system and keep written records on- site, in accordance with NFPA 25 and RSC Technical Guidelines (Standard) ¹ V1.0.	Within 1 month after installation
F-34	Inspection, Testing & Maintenance (Fire)	Inspection, testing, and maintenance for the exit sign and emergency lighting system are not in accordance with the RSC Technical Guidelines (Standard) ¹ V1.0.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with the RSC Technical Guidelines (Standard) ¹ V1.0. Keep written records on-site.	Within 1 month after installation
F-35	Inspection, Testing & Maintenance (Fire)	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 Technical Guidelines (Standard) ¹ V1.0.	Within 1 month

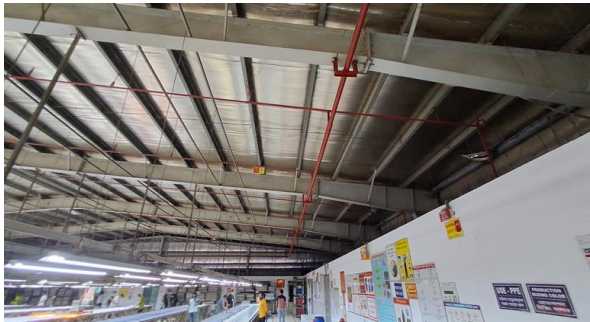
Table-2: Finding & Recommendation for Building-1, 2, 3, 4, 5, 6, 7, 8, 12 & 13.

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-36	Means of Egress	The exit stair enclosures are not separated from work areas and other spaces on each floor by fire-rated construction. Location: Building 1, 2 & 3.	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



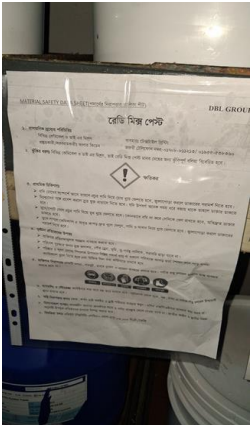
F-37	Means of Egress	Storage areas, generator rooms, boiler rooms and similar normally unoccupied spaces discharges directly into the exit stair enclosure. Location: Building 1, 2 & 3 (Northwest, south exit stair and southwest exit discharge)	Openings from exit enclosure to Storage areas/ basements/ 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 min 1-hr fire rated door on the exit stair side and a 1.5 hr./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-38	Means of Egress	Exit stair(s) terminates the occupants inside the building which does not comply with section 6.17 of RSC Technical Guidelines (Standard)¹ V1.0. Location: Building 1 & Building 2 (Northwest exit stair)	Exits shall discharge directly to the exterior of the building unless meeting the requirements of 6.17.2 or 6.17.3 as per RSC Technical Guidelines (Standard)¹ V1.0.	Within 3 Months
				

F-39	Means of Egress	Exit stairs serve more than 5 stories and do not have required reentry provisions on all floors. Location: Building 2	Every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets RSC Technical Guidelines (Standard) ¹ V1.0. Section 6.8.3.1.	Within 3 Months
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F-40	Means of Egress	Fire evacuation maps is not posted at the entrance of all exit stair. Location: Block A (Building 1)	Fire evacuation maps shall be posted at the entrance to each exit stair in accordance with RSC Technical Guidelines (Standard) ¹ V1.0 Section 13.3.	Within 1 Month
				
F-41	Means of Egress	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: Block A (Building 1) & Block B (Building 2)	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. Illumination on means of egress shall meet in accordance with RSC Technical Guidelines (Standard) ¹ V1.0 Section 10.12.2.	Within 3 Months
				

F-42	Means of Egress	Parapets or guards are not provide in occupiable roof. Location: Block C (Building 3) & Block D (Building 2)	Provide parapets or guards with a minimum height of 1067mm (42 inch.) in accordance with RSC Technical Guidelines (Standard)¹ V1.0 Section 6.12.	Within 3 Months
 				
F-43	Means of Egress	Unsealed penetrations and openings are located in exit stair enclosures. Electrical cable raceway or other utility lines passing through the exit enclosure. Location(s): Building 7 southeast exit.	No other penetration into and through the exit enclosure except for fire alarm equipment electrical raceway, required exit doors, sprinkler piping, standpipes, and electrical conduit serving the exit enclosure is permitted in accordance with section 6.14.4 of RSC Technical Guidelines (Standard)¹ V1.0. So, relocate the electrical wires/raceways to somewhere else avoiding the exit enclosure, and seal the created unprotected openings with a minimum of 1.5 hours listed/certified fire-rated materials. Installation shall be as per manufacturer published installation guideline and the certification authority guideline to ensure the fire-rating. Or seal the penetration by 2-hr masonry construction.	Within 3 Months
				

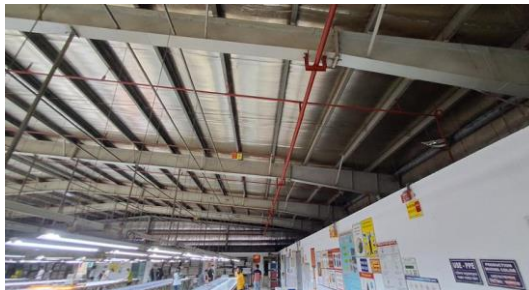
F-44	Means of Egress	The exit and exit discharge path is not separated from the adjacent production and storage area at building 6 & 7. Location: South stair and Southwest exit of Building 1 on the Ground floor	Provide fire separation with stair enclosure in accordance with section 6.3.1 of RSC Technical Guidelines (Standard)¹ V1.0.	Within 3 Months
 				
F-45	Fire Rated Construction	Penetrations through floor/ceiling assemblies are found unsealed. Location: Block A (Building 1)	Seal all penetrations and openings in floor/ceiling assemblies by a listed through-penetration fire stop system tested in accordance with ASTM E814 or approved alternative standard to maintain minimum 3-hr./ 2-hr. fire resistance rating. Installation shall be as per manufacturer published installation guideline and the certification authority guideline to ensure the fire-rating in accordance with section 4.7 of RSC Technical Guideline (Standard) Or, Provide a minimum 2-hr fire rated shaft to separate the penetration from each floor if <u>required</u>.	Within 3 Months
 				

F-46	Fire Rated Construction	Chemical storage area is not separated by fire-rated construction having non rated door and unsealed penetrations and openings. Location: 2nd floor of Building 1 & Storage Shed-2 (BLOCK-G) Building-7	Provide a 4-hour fire-rated construction barrier to separate the chemical store from the surrounding production/combustible storage areas. The 4-hour fire-resistive separation shall have no openings/ no unprotected openings therein and shall provide a fire resistance for at least four hour. Chemical stores shall comply with BNBC 2006, Part 3, Section 2.13. or, Ensure exempt amounts of chemical are located on chemical stores with other occupancy as per Table 3.2.7 (BNBC 2006) with resemble occupancy. Provide fire separation if required.	Within 3 Months
 				

F-47	Fire Rated Construction	Flammable liquid (diesel tank) exceeding the exempted amount (13,500 liters observed during the inspection) was found without the required fire separation distance and exterior wall rating, as per BNBC 2006 requirements. Location: Building-13: DIESEL STORAGE Room	The diesel tank shall be separated or exterior walls shall have a fire resistance and opening protection in accordance with BNBC 2006 Part 3 Table 3.2.2 and Section 2.4.1.3. Additionally a license must be obtained in accordance with the Petroleum Act for all storage of Class II petroleum greater than 1000 L (264 gal) individually and 2000 L (528 gal) aggregate and storing criteria shall be followed as per the license provided by the Department of Explosives Bangladesh.	Within 3 Months
				
F-48	Fire Alarm & Detection System (FADS)	An addressable fire alarm and detection system found installed in the inspected areas, which requires detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard). Location: Building-1, 2, 3, 4, 5, 6, 7, 8, 12 & 13.	Submit the proposed fire alarm system & detection system design to RSC for initial review. Once the design is reviewed, install the fire detection and alarm system throughout the buildings in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 72. After installation the factory shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation/modification within 4 months.



F-49	Fire Suppression System (SUPS)	The existing non-rated construction has an occupied floor greater than 2,000 sq-mts (22,000 sf), is higher than 2 floors and is not provided with automatic sprinkler protection, which is required as per section 3.5.3 of RSC Technical Guideline (Standard). The large occupant loads, heavy fuel loading, and anticipated extended egress times warrant sprinkler protection. Automatic sprinkler system has been installed in lieu of the automatic fire detection system at the buildings and sheds. The sprinkler system is required to be reviewed according to the NFPA guidelines. Location: Building-1, 2, 3, 4, 5 (Building 1, building 2, building 3, building 4 & building 5 are the same fire compartment).	Submit the fire Suppression System (fire pump, standpipe and sprinkler) design to RSC for review. Once the design is reviewed, install and modify the fire Suppression System throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 13, 14, 20, 22 and 24. 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/modification within 4 months
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F-50	Fire Suppression System (SUPS)	Automatic sprinkler system has been installed in lieu of the automatic fire detection system at the buildings and sheds. The sprinkler system is required to be reviewed according to the NFPA guidelines. Location: Building- 6, 7,	Submit the fire Suppression System (fire pump, standpipe and sprinkler) design to RSC for review. Once the design is reviewed, install and modify the fire Suppression System throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 13, 14, 20, 22 and 24. 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/modification within 4 months
				
F-51	Fire Rated Construction	The required fire separation distance for Building does not comply with the requirements of BNBC 2020. Location: Building- 6, Height: Monitor 25'7" Eve 17'1", Open space at South 14'9" from boundary wall, North 0" from building 1, East 5'4" from guard room 15'9" at north edge, West 13'3" from boundary wall. Location: Building- 7, Height: Monitor 25'9" Eve 19'9", Open space at South 14'7" from boundary wall, North 10'10" from boundary wall, East 0" (due to canopy at south side) & 4'6" (at north side), West 3' from boundary wall	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-52	Fire Rated Construction	Rooms used for storage of combustible materials are not separated from the surrounding occupancy/areas. Location: Building 6 and Building 12.	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
 				