

INITIAL FIRE SAFETY INSPECTION REPORT

Robintex (Bangladesh) Ltd. (Extension)

RSC ID: 25613

ADDRESS: Vulta, Rupgonj, Narayanganj

Other Factories: Robintex(bangladesh) ltd_9519, comptex bangladesh ltd_9480 & Comtex bangladesh ltd(new building)_12577



Inspected By: Ahammad Kabir, Md. Anisuzzaman & Asma

Date: 21 April 2024

Fire Safety Inspection Report

Robintex (Bangladesh) Ltd. (Extension)

Introduction:

Robintex (Bangladesh) Ltd. (Extension); complex was surveyed for fire safety on **21/04/2024** 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

Factory Building name(s): There are 19 structure under this ID-25613 which are listed below:

Serial number	Building Name	Construction Type	Date of Construction	Number of story	Design Approved(date & authority)	Type of building as per RSC Technical guideline	Floor Area in meter square (m2)
1	All over print	Steel structure	Jan-15 to Feb-16 & Occupied: Feb-16	Single storied with Mezzanine	24/11/2014, LGED Narayanganj	Interim Construction/building	9249
2	Jhut Boiler room	Steel structure	Aug-20 to Jun-21 & occupied: Jun-21	Single storied	18/08/20, LGED Narayanganj	Interim Construction/building	132
3	33 KV substation	RCC structure	Jun-17 to Jul-18 & Occupied: Jul-18	Single storied	28/06/2017, LGED Narayanganj	Interim Construction/building	87
4	AOP Utility	RCC structure	Jun-17 to Jul-18 & Occupied: Jul-18	Single Storied	28/06/2017, LGED Narayanganj	Interim Construction/building	372
5	Central Warehouse	Steel structure	Jun-17 to Jul-19 & Occupied: Aug-19	Single Storied	28/06/17, LGED Narayanganj	Interim Construction/building	3190
6	Wastage warehouse	Steel structure	Jun-17 to Jul-19 & Occupied: Aug-19	Single storied	28/06/17, LGED Narayanganj	Interim Construction/building	1394
7	Chemical Store	Steel structure	Jun-17 to Jul-19 & Occupied: Aug-19	Single storied	28/06/17, LGED Narayanganj	Interim Construction/building	764
8	Digital Printing-01	Steel structure	Aug-20 to Sep-21 & Occupied: Oct-21	Single storied	23/08/2020, LGED Narayanganj	Interim Construction/building	2787
9	Digital Printing-02	Steel structure	Aug-20 to Sep-21 & Occupied: Oct-21	Single storied	23/08/2020, LGED Narayanganj	Interim Construction/building	4181
10	New Utility(MS Labrio)	Steel structure	Aug-20 to Sep-21 & Occupied: Oct-21	Single storied	23/08/2020, LGED Narayanganj	Interim Construction/building	465
11	Fire Pump Room	Steel structure	Jun-17 to Jun-21 & Occupied: Jun-21	Single storied with basement	28/06/17, LGED Narayanganj	Interim Construction/building	33
12	ETP building-01	RCC structure	Jun-17 to Jun-21 & Occupied: Jun-21	3-Storied	28/06/17, LGED Narayanganj	Interim Construction/building	1950
13	ETP building-02	RCC structure	Jun-17 to Jun-21 & Occupied: Jun-21	4-Storied	28/06/17, LGED Narayanganj	Interim Construction/building	5016

14	Workshop building	RCC structure	Jun-17 to Jun-21 & Occupied: Jun-21	3-storied	28/06/17,LGED Narayanganj	Interim Construction/building	1584
15	General Store	Steel structure	Jun-17 to Jun-21 & Occupied: Jun-21	Single storied	28/06/17,LGED Narayanganj	Interim Construction/building	320
16	RMS room	Masonary structure	Jun-17 to Aug-17 & Occupied: Sep-17	Single storied	28/06/17,LGED Narayanganj	Interim Construction/building	34
17	Main Gate Security room	Steel structure	Jun-17 to Jul-17 & Occupied: Aug-17	Single storied	28/06/17,LGED Narayanganj	Interim Construction/building	14
18	Ansar Camp	Steel structure	Jun-17 to Aug-17 & Occupied: Sep-17	Single Storied	28/06/17,LGED Narayanganj	Interim Construction/building	113
19	Fire control Room	RCC structure	Jun-17 to Aug-17 & Occupied: Sep-17	Single storied	28/06/17,LGED Narayanganj	Interim Construction/building	29

Factory Address: Vulta, Rupgonj,Narayanganj

Points of contact:

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Findings & Recommendations :

Table 1-summarizes 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 approval

Table-1: Finding & recommendation for the ETP building -01 & ETP building -02

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire rated Construction	Prayer room is not properly fire separated from other occupancy by fire rated construction. Location: 3rd floor of ETP building-02	Separate the Prayer area from production & other occupancies by minimum 3-hr fire rated construction. Provide rated exit passageways leading directly to the exit stairs with the same resistance rating. OR Relocated the prayer room.	Within 3 months
				

F-2	Fire rated construction	Storage were observed underneath the cutting tables. Location: 2nd & 3rd floor of the ETP building-02	Storage underneath the cutting tables shall be kept clear of combustibles at all time, except as provided for miscellaneous storage in accordance with 3.4.2.1.6 or where automatic sprinkler protection is installed. Where an automatic sprinkler system is installed sprinklers are required to be installed beneath cutting tables greater than 4 ft in width that are used for storage of combustibles as per RSC Technical Guideline Standard V1-13.7.2	Within 3 months
 				
F-3	Fire Rated Construction	Room used for combustible storage are not properly fire separated by fire rated construction. Location: 2nd floor of ETP building 01	Provide dedicated storage rooms separated by minimum 1 hr. fire rated construction. Seal all unprotected openings and penetration.	Within 3 months



F-4	Fire Rated Construction	Chemical store room is not properly separated due to unprotected opening Location: Near to ETP building -01	Separate the chemical storage room by minimum 4-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations. Follow section-2.13 and Table 3.2.1 of BNBC-2006 for the guideline. Keep SDS of all chemicals in the storage area for review. Construction of non-high-rise buildings containing J occupancies (chemical store) shall be Type 1 construction [RSC Technical Guidelines (Standard) 3.5.2.2].	Within 3 months
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F-5	Fire Rated Construction	Chemical storage area(Sub room) is not separated by fire-rated construction having non rated door and unsealed penetrations and openings. Location: 1s, 2nd & 3rd floor of the ETP building-02	Separate the chemical storage room by minimum 4-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations. Follow section-2.13 and Table 3.2.1 of BNBC-2006 for the guideline. Keep SDS of all chemicals in the storage area for review. Construction of non-high-rise buildings containing J occupancies (chemical store) shall be Type 1 construction [RSC Technical Guidelines (Standard 3.5.2.2)].	Within 3 months
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F-6	Fire Rated Construction	Unsealed penetrations and openings are located in the fire rated floor/ceiling assemblies. Location: The ETP building-01 & 02	Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor level or seal all penetrations and openings in floors/ceiling assemblies by 3-hr fire rated listed/certified materials. The installation of such fire rated materials shall be following certified design.	Within 3 months



F-7	Mean of Egress	The exit stairs are not separated from [work areas, other spaces] on each floor by fire rated construction due to unprotected opening & non functional fire doors. Location: ETP building 01 & ETP building 02	The exit stair enclosure shall be provided with a minimum of 2- hr. fire resistance rating with 90 minutes opening protection. 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. Once fire doors are installed, every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets RSC Technical Guideline (Standard) V1 6.8.3.1.	Within 3 months
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F-8	Means of Egress	Parapets or guards are provided in occupied roof which is less than 1067mm (42 inch). Location: ETP building -01	Provide parapets or guards with a minimum height of 1067mm (42 inch.) 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.)	Within 3 months
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F-9	Means of Egress	Building did not have stair designation signs & exit designation signs at required locations. Location: ETP building 01 & ETP building -02	Provide stair designation sign & exit 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.	Within 1 month
F-10	Means of Egress	Travel distance is more than 23 meter on the ground floor where single exit is provided. Location: ETP building 01 & ETP building -02	Provide additional exit or reduce the travel distance to not more than 23 meter according to RSC Technical Guide V1 table 6.6.2.	Within 3 months



F-11	Means of egress	Handrails are not provided on both sides of exit stair. Location: ETP building 01	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-12	Means of Egress	Aisles marked are not provided at several floors . Location: ETP building -02.	Aisles shall be provided with a minimum unobstructed clear- with of 0.9m (36 in)	Within 2 months



F-13	Means of egress	Building did not have occupant load signs at required locations. Location: ETP building 01 & ETP building 02	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.	Within 1 month
F-14	Means of egress	Width of exit stairs are less than 1.5 m (60 in.). Location: Both exit stair of the ETP building 01	Provide exit stair minimum clear and unobstructed width of 1.5 m (60 in.) in accordance with RSC Technical guideline standard V1-6.5.6.2.1.	Within 3 months



F-15	Means of Egress	Falling hazard creates through the outside of lift shaft. Location: North side of the ETP building 02	Provide guards with a minimum height of 1067mm (42 inch.) 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.)	Within 1 month
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F-16	Mean of Egress	Updated fire evacuation maps is not posted at the entrance of all exit stair. Location: ETP building 01 & ETP building 02	Update Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-17	Egress lighting	Exit sign is not provided at required exits. Location: 2nd floor of the ETP building-01	Lighted exit signs shall be placed at entrance to an exit. Additional 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 1 month
F-18	Egress lighting	Directional signs are not provided where direction of the path of travel to an exit has changed. Location: ETP building 01 & ETP building 02	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.	Within 1 month
F-19	Egress lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes . Location: ETP building 01 & ETP building 02	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 3 months



F-20	ITM(Egress lighting)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: ETP building 01 & ETP building 02	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 month
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F-21	Fire Alarm & Detection System (FADS)	Addressable fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standard. Location: ETP building 01 & ETP building 02	Submit design, documents and calculations to RSC for review prior and based on the review modify the system if there is any. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Design Review within 1 month and modification within 3 months (If require).
  				
F-22	Fire alarm & Detection System (ITM of FADS)	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per RSC standard. Location: ETP building 01 & ETP building 02	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72 (Table-14.3.1) or as per RSC standard.	Within 1 Month after modification(If require).

F-23	Fire Protection System(Standpipe)	Standpipe system installation requires detailed review to confirm compliance with NFPA- 14 , 20 ,22 & 24 or as per RSC standard. Location: ETP building 01 & ETP building 02	Submit the standpipe system drawing to RSC for review. Once the design is reviewed, install and modify the standpipe system throughout the building in accordance with review comment, RSC Standard and NFPA- 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 1 month and modification within 3 months (If require).
 				
F-24	ITM of Protection System(SUPS)	Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 25 or as per RSC standard. Location: ETP building 01 & ETP building 02	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 25 or as per RSC standard.	Within 1 Month after modification(If require).

F-25	ITM of Protection System(SUPS)	Inspection, testing, and maintenance for the fire pump system is not in accordance with NFPA 25 or as per RSC standard. Location: ETP building 01 & ETP building 02	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 25 or as per RSC standard.	Within 1 Month after modification(If require).
F-26	Fire Protection System(ITM of Extinguisher)	Inspection, testing, and maintenance of the extinguisher system is not in accordance with NFPA 10 or as per RSC standard. Location: ETP building 01 & ETP building 02	Inspect, test and maintain the extinguisher system, and keep written records on-site, in accordance with NFPA 10 or as per RSC standard.	Within 3 months
F-27	No smoking sign	The required no smoking signs are not present in the factory. Location: ETP building 01 & ETP building 02	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.	Within 1 month

Table-2: Finding & recommendation for the Digital printing shed -01 & Digitail printing shed-02

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire rated Construction	The main structural elements of factory buildings (G and/ or H2) are constructed by steel which is non-rated structure and were found in exposed condition without any fire protection. As per RSC Technical Guidelines (Standard) V1 1.5.5 this building is defined as an interim building so, fire protection shall be provided for the structural elements of the building following section 3.5.2 of RSC Technical Guidelines (Standard) V1.0. Location: Digital printing shed -01 & Digital printing shed-02	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1 & Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) V1. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 3 months
 				

F-2	Fire rated construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: Digital printing shed -01 & Digital printing shed-02	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. 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) from other storage areas 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 fire rated construction.	Within 3 months
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F-3	Mean of Egress	Exits are not remotely located from each other. Location: Digital printing shed -01 & Digital printing shed-02	Modify exit arrangement to meet RSC Technical guideline standard V1-6.6.6. or Provide additional exit(s) to meet RSC Technical guideline standard V1- 6.6.6.	Within 3 months
				
F-4	Means of Egress	Common path of egress travel was more than 23 m in the ground floor Location: Digital printing shed -01 & Digital printing shed-02	Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 23m.	Within 3 months



F-5	Means of Egress	Building did not have stair designation signs & exit designation signs at required locations. Location: Digital printing shed -01 & Digital printing shed-02	Provide stair designation sign & exit 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.	Within 1 month
				

F-6	Means of Egress	Aisles marked are not provided at digital printing shed 01 & digital printing shed-02 . Location: Digital printing shed -01 & Digital printing shed-02	Aisles shall be provided with a minimum unobstructed clear- with of 0.9m (36 in)	Within 2 months
				
F-7	Means of egress	Building did not have occupant load signs at required locations. Location: Digital printing shed -01 & Digital printing shed-02	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.	Within 1 month

F-8	Means of egress	Stair treads are not as per standard. Location: Digital printing shed -01 & Digital printing shed-02	Stair treads shall be of nominal uniformity as per RSC Technical guideline standard V1-6.9.2.3	Within 1 month
 				
F-9	Means of egress	Width of ramp stairs are less than 1.5 m (60 in.). Location: Digital printing shed -01 & Digital printing shed-02	Provide exit stair minimum clear and unobstructed width of 1.5 m (60 in.) in accordance with RSC Technical guideline standard V1-6.5.6.2.1.	4 months

				
F-10	Means of Egress	Headroom for pocket gate was not found as per standard. Location: Digital printing shed -01 & Digital printing shed-02	The minimum headroom shall be 2.03m (6 ft 8 inch). Doors in a means of egress shall have a minimum width of 1 m (39 in.).	Within 1 month
				

F-11	Mean of Egress	Updated fire evacuation maps is not posted at the entrance of all exit stair. Location: Digital printing shed -01 & Digital printing shed-02	Update Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-12	Means of egress	Collapsible gates/sliding doors are provided. Location: Digital printing shed-02	Replace all collapsible gates/ sliding doors/ rolling shutter doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize specialized door locking features complying with NFPA 101.	Within 1 month



F-13	Egress lighting	Directional signs are not provided where direction of the path of travel to an exit has changed. Location: Digital printing shed -01 & Digital printing shed-02	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.	Within 1 month
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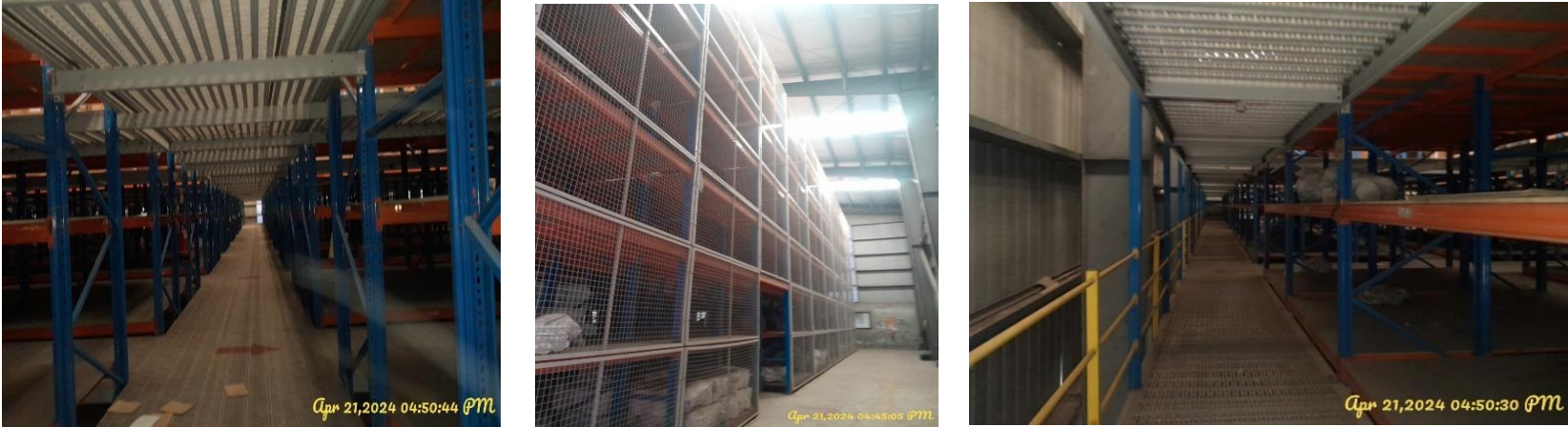
F-14	Egress lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes . Location: Digital printing shed -01 & Digital printing shed-02	Test the emergency lighting system on each floor and provide additional emergency fixtures 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 3 months
 				
F-15	ITM(Egress lighting)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: Digital printing shed -01 & Digital printing shed-02	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 month

F-16	Fire Alarm & Detection System (FADS)	Addressable fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standard. Location: Digital printing shed -01 & Digital printing shed-02	Submit design, documents and calculations to RSC for review prior and based on the review modify the system if there is any. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Design Review within 1 month and modification within 3 months (If require).
  				
F-17	Fire alarm & Detection System (ITM of FADS)	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per RSC standard. Location: Digital printing shed -01 & Digital printing shed-02	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72 (Table-14.3.1) or as per RSC standard.	Within 1 Month after modification(If require).

F-18	Fire Protection System(ITM of Extinguisher)	Inspection, testing, and maintenance of the extinguisher system is not in accordance with NFPA 10 or as per RSC standard. Location: Digital printing shed -01 & Digital printing shed-02	Inspect, test and maintain the extinguisher system, and keep written records on-site, in accordance with NFPA 10 or as per RSC standard.	Within 3 months
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Table-3: Finding & recommendation for the Building-5: Central ware house & Building-6: warehouse

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire rated Construction	The main structural elements of factory buildings (G and/ or H2) are constructed by steel which is non-rated structure and were found in exposed condition without any fire protection. As per RSC Technical Guidelines (Standard) V1 1.5.5 this building is defined as an interim building so, fire protection shall be provided for the structural elements of the building following section 3.5.2 of RSC Technical Guidelines (Standard) V1.0. Location:building-5: Central ware house & building-6: warehouse	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1 & Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) V1. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 3 months
				

F-2	Fire rated construction	Catwalk has been constructed on High rack storage and the area of the intermediate deck creates a full floor where the size of the deck is more than 33% of the total floor area and requires fire rated separation for both deck and structural members of the shed. Location: Central warehouse	Remove all catwalk and stair from the multi-storied storage (combustible materials) rack facilities area. or Separate each floors by fire rated construction as per BNBC, Part-3, chapter-3 and Table 3.3.1.	Within 3 months
				

F-3	Mean of Egress	Exits are not remotely located from each other. Location: Building-6: warehouse	Modify exit arrangement to meet RSC Technical guideline standard V1-6.6.6. or Provide additional exit(s) to meet RSC Technical guideline standard V1- 6.6.6.	Within 3 months
 				
F-4	Means of Egress	Building did not have exit designation signs at required locations. Location: building-5: Central ware house & building-6: warehouse	Provide exit 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.	Within 1 month

F-5	Means of Egress	Uneven path of travel and blockage in exit access Location: East & west side of the central warehouse.	Remove unnecessary items and level exit path to the public way.	Within 2 months
 				
F-6	Means of egress	Building did not have occupant load signs at required locations. Location: building-5: Central ware house & building-6: warehouse	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.	Within 1 month
F-7	Mean of Egress	Updated fire evacuation maps is not posted at the entrance of all exit stair. Location: building-5: Central ware house & building-6: warehouse	Update Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month

F-8	Egress lighting	Directional signs are not provided where direction of the path of travel to an exit has changed. Location: building-5: Central ware house & building-6: warehouse	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.	Within 1 month
F-9	Egress lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes . Location: building-5: Central ware house & building-6: warehouse	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 3 months
F-10	ITM(Egress lighting)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: building-5: Central ware house & building-6: warehouse	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 month

F-11	Fire Alarm & Detection System (FADS)	Addressable fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standard. Location: building-5: Central ware house & building-6: warehouse	Submit design, documents and calculations to RSC for review prior and based on the review modify the system if there is any. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Design Review within 1 month and modification within 3 months (If require).
  				
F-12	Fire alarm & Detection System (ITM of FADS)	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per RSC standard. Location: building-5: Central ware house & building-6: warehouse	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72 (Table-14.3.1) or as per RSC standard.	Within 1 Month after modification(If require).

F-13	Fire Protection System(ITM of Extinguisher)	Inspection, testing, and maintenance of the extinguisher system is not in accordance with NFPA 10 or as per RSC standard. Location: building-5: Central ware house & building-6: warehouse	Inspect, test and maintain the extinguisher system, and keep written records on-site, in accordance with NFPA 10 or as per RSC standard.	Within 3 months
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Table-4: Finding & recommendation for the Building-14: Workshop Building 3 storied RC Structure with shed on top

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire rated Construction	The main structural elements of factory buildings (G and/ or H2) are constructed by steel which is non-rated structure and were found in exposed condition without any fire protection. As per RSC Technical Guidelines (Standard) V1 1.5.5 this building is defined as an interim building so, fire protection shall be provided for the structural elements of the building following section 3.5.2 of RSC Technical Guidelines (Standard) V1.0. Location: Building-14: Workshop Building	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1 & Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) V1. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 3 months
				

F-2	Fire rated construction	Stair treads are not as per standard Location. Location: Building-14: Workshop Building	Stair treads shall be of nominal uniformity as per RSC Technical guideline standard V1-6.9.2.3	Within 3 months
				
F-3	Means of egress	Handrails are not provided on both sides of exit stair. Location: ETP building 01	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-4	Mean of Egress	A single means of exit has been provided at 3 storied building. Location: Building-14: Workshop 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 RSC Technical Guideline (Standard)-6.6.2, a single means of egress is permitted by RSC Technical Guideline (Standard)-6.6.5 or where a greater number is required by RSC Technical Guideline (Standard)-6.6.3. For Basement/Ground floor Maintain maximum 50 occupants having a travel distance of 23m (75 ft). Or Provide additional exit. For First Floor Maintain maximum 30 occupants having a travel distance of 23m (75 ft) for occupancy F,G & H only. Or Provide additional exit.	Within 3 months
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F-5	Means of Egress	Building did not have exit designation signs at required locations. Location: Building-14: Workshop Building	Provide exit 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.	Within 1 month
F-6	Means of egress	Building did not have occupant load signs at required locations. Location: Building-14: Workshop 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.	Within 1 month

F-7	Mean of Egress	Updated fire evacuation maps is not posted at the entrance of all exit stair. Location: Building-14: Workshop Building	Update Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-8	Mean of Egress	Width of exit stair is less than 1.5 m (60 in.). Location: Building-14: Workshop Building	Provide exit stair minimum clear and unobstructed width of 1.5 m (60 in.) in accordance with RSC Technical guideline standard V1-6.5.6.2.1.	Within 3 months
F-9	Egress lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes . Location: Building-14: Workshop 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 3 months
F-10	ITM(Egress lighting)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: Building-14: Workshop Building	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 month

F-11	Fire Alarm & Detection System (FADS)	Addressable fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standard. Location: Building-14: Workshop Building	Submit design, documents and calculations to RSC for review prior and based on the review modify the system if there is any. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Design Review within 1 month and modification within 3 months (If require).
  				
F-12	Fire alarm & Detection System (ITM of FADS)	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per RSC standard. Location: Building-14: Workshop Building	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72 (Table-14.3.1) or as per RSC standard.	Within 1 Month after modification (If required).

Table-5: Finding & recommendation for the Building-1: AOP Building, Building-7: Chemical Store, Building-15: General store shed.

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire rated Construction	The main structural elements of factory buildings (G and/ or H2) are constructed by steel which is non-rated structure and were found in exposed condition without any fire protection. As per RSC Technical Guidelines (Standard) V1 1.5.5 this building is defined as an interim building so, fire protection shall be provided for the structural elements of the building following section 3.5.2 of RSC Technical Guidelines (Standard) V1.0. Location: Building-1: AOP Shed Building, Building-7: Chemical Store Shed, Building-15: General Store Shed	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1 & Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) V1. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 3 months



F-2	Fire Rated Construction	Chemical storage area(Sub room) is not separated by fire-rated construction having non rated door and unsealed penetrations and openings. Location: Building-1: AOP Shed Building, Building-7: Chemical Store Shed,	Separate the chemical storage room by minimum 4-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations. Follow section-2.13 and Table 3.2.1 of BNBC-2006 for the guideline. Keep SDS of all chemicals in the storage area for review. Construction of non-high-rise buildings containing J occupancies (chemical store) shall be Type 1 construction [RSC Technical Guidelines (Standard) 3.5.2.2].	Within 3 months
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F-3	Means of egress	Handrails are not provided on both sides of exit stair. Location: Building-2: Jhut Boiler Shed.	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
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F-4	Egress lighting	Directional signs are not provided where direction of the path of travel to an exit has changed. Location: Building-1: AOP Shed Building	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.	Within 1 month
F-5	Means of Egress	Building did not have exit designation signs at required locations. Location: Building-1: AOP Building	Provide exit 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.	Within 1 month

F-6	Means of egress	Building did not have occupant load signs at required locations. Location: Building-1: AOP 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.	Within 1 month
F-7	Mean of Egress	Updated fire evacuation maps is not posted at the entrance of all exit stair. Location: Building-1: AOP Building	Update Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-8	Mean of Egress	Walking surface were not found level from exit discharge and are not protected from slip or tripling hazard. Location: Building-1: AOP Building	Provide an level walking surface in exit discharge in accordance with 6.3.4 of RSC Technical Guidelines (Standard).	Within 3 months
				

F-9	Egress lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes . Location: Building-1: AOP 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 3 months
				
F-10	ITM(Egress lighting)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: Building-1: AOP Building	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 month

F-11	Fire Alarm & Detection System (FADS)	Addressable fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standard. Location: Building-1: AOP Building	Submit design, documents and calculations to RSC for review prior and based on the review modify the system if there is any. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Design Review within 1 month and modification within 3 months (If require).
  				
F-12	Fire alarm & Detection System (ITM of FADS)	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per RSC standard. Location: Building-1: AOP Building	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72 (Table-14.3.1) or as per RSC standard.	Within 1 Month after modification (If required).