

INITIAL FIRE SAFETY INSPECTION REPORT

KORMOP CO.LTD.

RSC ID: 26000

53/1, Block No-C, Ward No-3, Belma Ashulia, Bangladesh

GPS: 23.895155,90.291954

Other Factories: N/A



Inspected By: Md. Kamrul Hasan

Date: 24-Feb-2025

Fire Safety Inspection Report

Introduction:

KORMOP CO.LTD. complex was surveyed for fire safety on **24-February-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

Factory Building name(s):

- 1. Factory Building-1 (Steel Shed) (G+M1+M2)** (Construction duration: Apr, 2012 - Dec, 2013; Occupied: Jan, 2024)
- 2. Factory Building-2 (RCC) (G+4)** (Construction duration: 1st Phase: Apr, 2014 - Apr 2015 upto 1st floor; 2nd Phase: Dec, 2019 - Dec 2020 upto 4th floor; Occupied: Aug, 2015)
- 3. Generator Shed, (G) (Steel Shed)** (Construction duration: Apr, 2019- May, 2019; Floor Occupied: May, 2019)
- 4. Wastage Shed, (G) (Steel Shed)** (Construction duration: Apr, 2019- May, 2019; Floor Occupied: May, 2019)
- 5. Compressor Shed, (G) (Steel Shed)** (Construction duration: Jul, 2024- Aug, 2024; Floor Occupied: Aug, 2024)

Factory Address: 53/1, Block No-C, Ward No-3, Belma Ashulia, Bangladesh

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 approval.

Table-1: Finding & recommendation

Sl No.	Category	Findings	Required Action	Remediation Time Frame
1	Means of egress	The exit stairs are not separated from work areas and other spaces on each floor by fire rated construction as non-rated doors were found installed at all floors level. Location: Factory Building-2.	Provide minimum 1-hr rated doors for buildings with 3 or fewer stories and 1.5-hr fire rated doors for buildings that are 4 or more stories. Seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system. Fire door shall install as per manufacturer guidelines. Clearance under the bottom of a door shall be a maximum of 3/4in. (19 mm). Product datasheet, certificate shall keep available at site for fire door, frame & accessories.	Within 3 months

  				
2	Fire-Rated Construction	Floor to floor penetrations were found due to plumbing pipes and BBT riser's in all floors level of Factory Building-2 and plumbing pipe at transformer room on the ground floor of Factory Building-1. Location: Factory Building-2 & Factory Building-1.	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

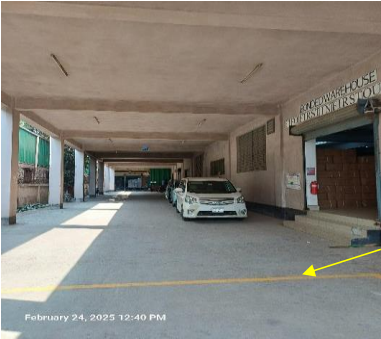
				
3	Fire Rated Construction	Elevator shaft directly open into the floors. Location: Factory Building-2.	Ensure minimum 1.5-hr fire rating for the doors of elevator shafts otherwise close the shafts area with 2-hr fire rated construction barrier and 1.5-hr fire rated doors. (In new construction, elevators shall not open into an exit enclosure [RSC Building Standard 6.14.3].	Within 3 months



4	Means of egress	Storage rooms discharges directly into both exit stair enclosure without any vestibules on the ground floor & first floor. Location: Factory Building-2.	Openings from exit enclosure to storage room spaces shall be provided with a vestibule with fire rated construction and openings. Provide a 1.5 hr. fire rated door on the exit stair side and a 1-hr. fire rated door on the Store room side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure. The minimum width of a vestibule shall be at least 1.1 m and not less than the width of the corridor leading to the vestibule. The minimum length of a vestibule in the direction of escape travel shall be 1.8 m.	Within 3 months
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5	Means of egress	Both exit Stair discharge the occupant inside the building on the ground floor. Location: Factory Building-2.	1. Modify stair to discharge directly outside. Or 2. Provide 1-hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas). Note: A maximum of 50 percent of the number and capacity of the exit enclosures can discharge through areas on the level of exit discharge where all the conditions described in RSC building standard 6.17.3 are met.	Within 3 months
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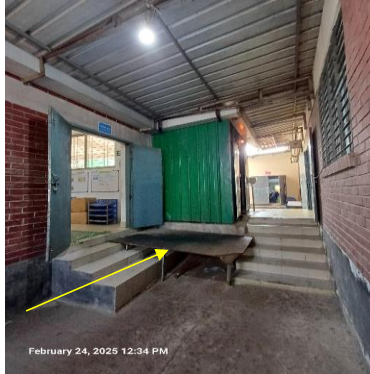
 				
6	Fire Rated Construction	Flammable liquid (diesel storages of approximately 3000 litre) was found without any fire separation distance and exterior wall rating, as per BNBC 2006 requirements besides stair-1 & lift on the ground floor. Location: Factory Building-2.	The diesel tank shall be separated or exterior walls shall have a fire resistance and opening protection in accordance with BNBC 2006 Part 3 Table 3.2.2. 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

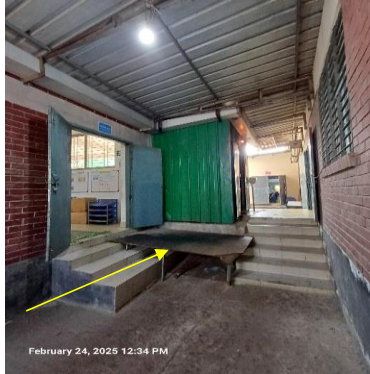


7	Means of egress	The parapet was constructed height of 39 inches, which does not comply with the standard requirements. Location: Factory Building-2.	All occupiable roofs shall be provided with parapets or guards with a minimum height of 1067mm (42 in.). Open guards shall have intermediate rails or 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.).	Within 1 month

				
8	Means of egress	The lift control panel was located at the top floor of the interior of stair-1. Location: Factory Building-2.	Remove and re-locate all electrical control panels board from exit stair enclosures.	Within 2 months

				
9	Means of egress	An irregular walking surface was identified at the discharge point of stair-01, located adjacent to the shed and lift. Location: Factory Building-2.	Walking surfaces shall be mostly level as per 6.3.5 of The RSC Technical Guidelines (Standard).	Within 1 month



				
10	Means of egress	Aisles are found provided at all floors, but at most of the floors aisles are not provided throughout the factory as per standard. Location: All Buildings.	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 3 months



11	Means of egress	Sliding and shutter type doors have provided along means of egress. Location: All Buildings.	Replace all collapsible/sliding/shutter type doors & gates by the side-hinged swinging type doors. All doors in a means of egress shall be of the side-hinged swinging type. Roll--down and sliding gates and shutters shall not be allowed. Doors serving an occupant load of more than 50 shall swing in the direction of egress travel.	Within 1 month
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12	Means of egress	Both the width of Stair-1 & Stair-2 was measured 47 inches which is not as per standard. Location: Factory Building-2.	In new and interim construction and constructed stairs post 24 November 2013, stairs shall have a minimum width of 1.5 m (60 in.) for all industrial occupancies and 2.0 m (79 in.) for all assembly occupancies. For assembly use areas provided for prayer halls, dining halls and like areas that are for integral use by the factory workers, the minimum width for the primary occupancy use of the building shall be permitted to be used.	Within 3 months

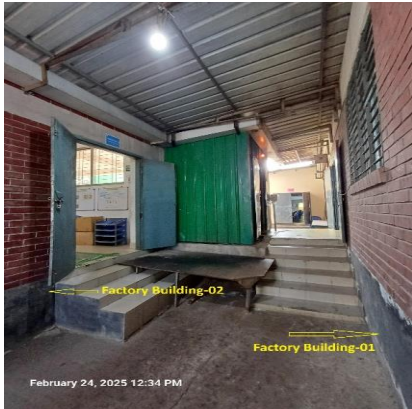
 				
13	Means of egress	Building does not have occupant load signs at required locations on all floors. Location: All Buildings.	Post the occupant load for every assembly and production floor in a facility in a conspicuous space near the main exit or exit access doorway for the space.	Within 1 month

14	Means of egress	Handrails are provided at one side of both exit stair and height of the handrail was found 32 inches. Also, no handrail was provided at stair stair-1 at discharge. Location: Factory Building-2.	Provide handrails on both side of the stairs which 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. Guards are required to be according to RSC Technical Guidelines 6.12.2 (a sphere of 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.).	Within 1 month
				

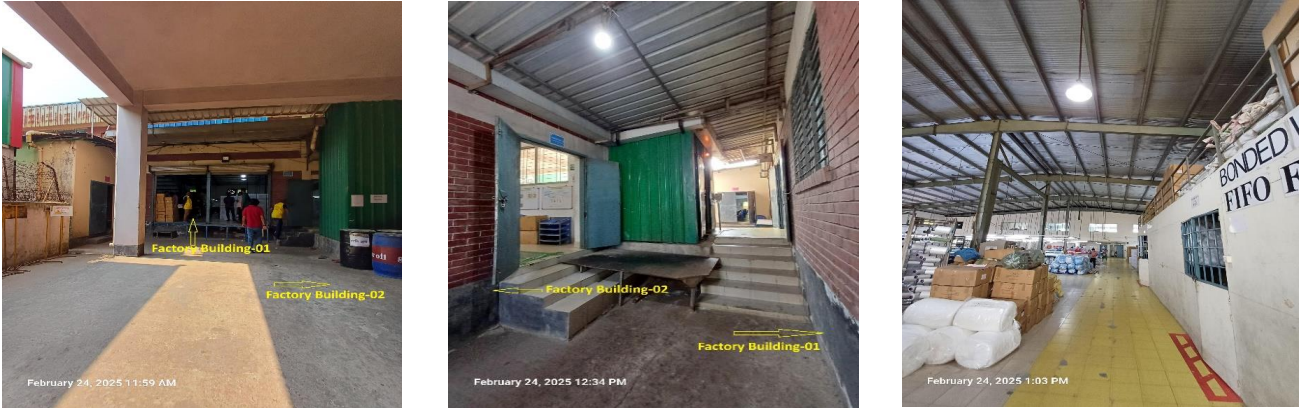
15	Emergency Lighting	Lighted exit signs are not provided at most of the exits. Location: All Buildings.	Provide exit signs above all building exits to the exterior, all doors to the exit stairs. Lighted exit signs shall be provided with either battery backup or uninterruptable power supply systems and shall be continuously illuminated.	Within 1 month
 				

16	Emergency Lighting	Manual on-off switches are provided for exit signage units. Location: All Buildings.	Remove manual on/off switches from emergency lighting / exit signage units to prevent them from being switched off.	Within 1 month
				

17	Emergency Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes and at exit stairs on all floors. Location: All Buildings.	Test the emergency lighting system on each floor and provide additional emergency fixtures to supply adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and along exit discharge paths and a minimum 2.5 lux along exit access aisles.	Within 2 months
 				
18	ITM Emergency Lighting	Inspection, testing, and maintenance for the emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard). Location: All Buildings.	Inspect, test and maintain the emergency lighting system in accordance with The RSC Technical Guidelines (Standard). Keep written records on-site.	Within 1 month

19	Fire Rated Construction	The required fire separation distance for Factory Building-1 does not comply with the requirements of BNBC 2006. Location: Factory Building-1.	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
				

20	Fire Rated Construction	Factory building-1 (Steel Shed) (Interim Structure) is attached with 5-storied RCC building (Factory Building-2) which has a height of 73 feet approximately; additionally, both the shed (Factory building-1) and the building (Factory building-2) share the same egress arrangements, placing them within the same fire compartment. The main structural elements of the Factory building-1 (Steel Shed) are constructed of steel, which is non-rated and was found in an exposed condition without any fire protection. Location: Factory building-1.	As per RSC Technical Guideline and BNBC 2006, The Fire rating of the structure requires to be confirmed as per BNBC 2006. The "Ministry of Housing and Public Works" has issued a resolution based on the recommendations from the House Building Research Institute (HBRI) and the Public Works Department (PWD) to 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.	Within 6 months
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21	Means of egress	The exit stair serving the mezzanine is not separated from work areas and other spaces on each floor by fire rated construction as non-rated doors were found installed at all floors level. Location: Factory Building-1.	Provide minimum 1-hr rated doors for buildings with 3 or fewer stories and 1.5-hr fire rated doors for buildings that are 4 or more stories. Seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system. Fire door shall install as per manufacturer guidelines. Clearance under the bottom of a door shall be a maximum of 3/4in. (19 mm). Product datasheet, certificate shall keep available at site for fire door, frame & accessories.	Within 3 months



22	Means of egress	The egress court [serving south & west exit] is less than 10 ft wide and is not separated from the building interior. Location: Factory building-1.	Egress courts less than 3050 mm (10 ft) in width (as measured from the building and the adjacent property line) shall be provided with walls having a 1-hr fire resistance rated construction for a distance of 3050 mm (10 ft) above the floor of the court. Seal all penetrations and openings to the interior of the building along the discharge path, up to a height of 10 ft. to provide a minimum 1-hr fire separation. Alternatively, provide a second remote discharge path to the public way.	Within 3 months
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23	Fire Rated Construction	Rooms used for combustible storage are not separated by fire rated construction on mezzanine and ground floor. Location: Factory Building-1.	Separate the dedicated storage rooms by minimum 1-hr fire-rated construction. Provide 0.75 hr. fire rated door and seal all penetrations and openings by 0.75 hr. (45 Minutes) fire rated fire rated barrier construction.	Within 3 months

 				
24	Fire Rated Construction	In-process store areas are not maintained as per standard and open to the factory floor. Location: Factory Building-1.	Provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.), maximum area of 23m² (250 ft²) and 3m (10ft.) clear distance from adjacent another unenclosed combustible storage. - If the building/floor is sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (1000 ft²). -In process storage shall be limited to 10 percent of the building area of the story in which they occur.	Within 2 months



				
25	Fire Rated Construction	Generator room is not properly separated by fire rated construction. Location: Factory Building-1.	Generator room shall be separated from other occupancies by a minimum 2-hr fire rated construction (wall, floor, slab etc.). Seal all penetrations and openings (door, window etc.) should be protected by 1.5-hr fire rated materials to maintain the fire separation if required. All exhaust systems shall discharge to the exterior of the building in a safe location. Or Relocate it to exterior of the building and maintain a minimum 3m (10 ft.) spatial separation distance from the building.	Within 2 months



26	Fire Rated Construction	Transformer room is not properly separated by fire rated construction. Location: Factory Building-1.	Oil filled transformer shall be separated from other occupancies by a minimum 2-hr fire rated construction (wall, floor, slab etc.). Switch gears and transformer bays shall be separately housed with a 2-hr rated wall in between. Seal all penetrations and openings (door, window etc.) should be protected by 1.5-hr fire rated materials to maintain the fire separation if required. All exhaust systems shall discharge to the exterior of the building in a safe location.	Within 2 months
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27	Fire Rated Construction	Compressor room is not properly separated by fire rated construction. Location: Factory Building-1.	Compressor or other heat producing equipment shall be separated from other occupancies by a minimum 1-hr fire rated construction (wall, floor, slab etc). Seal all penetrations and openings (door, window etc.) should be protected by 0.75-hr (45 min) fire rated materials to maintain the fire separation if required. Or Relocate it to exterior of the building and maintain a minimum 3m (10 ft.) spatial separation distance from the building.	Within 2 months
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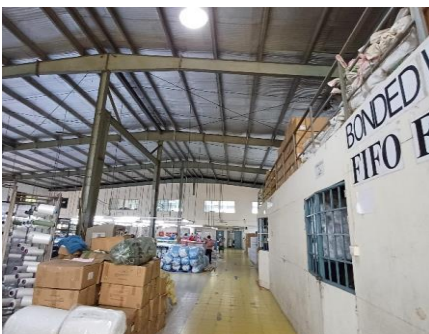


28	Fire Rated Construction	Dining area is not separated from store area with fire rated assemblies. Location: Factory Building-1.	Separate the dining area from other occupancies with 3-hr fire rated construction, provide minimum 3-hr. rated doors for the openings and seal the unprotected penetrations. Provide required exits that lead directly to the street or exit stairwell or leading to a corridor or open space.	Within 2 months
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29	Means of egress	Handrails were not installed at the stairs of both the south and west exits at the discharge area. Location: Factory Building-1.	Provide handrails on both side of the stairs which 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.	Within 1 month

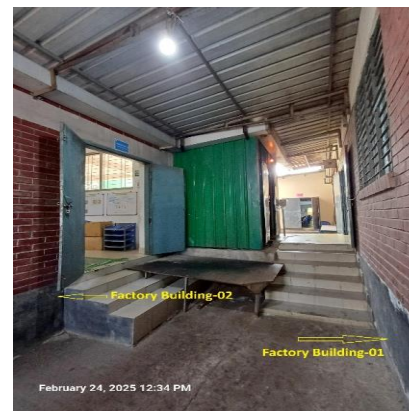
				
30	Means of egress	The daycare room is located on the mezzanine floor of factory building-01, which lacks adequate egress provisions. Location: Factory Building-1.	Daycare occupancies which are accessory to other occupancies shall be located on the ground floor with a maximum travel distance of 9 m (30 ft) or may be located one story above the level of exit discharge where direct access to an exit enclosure is provided.	Within 1 month
31	Emergency Lighting	Directional signs are not provided at most of the required locations. Location: Factory Building-1.	Provide illuminated directional signs where there is a change in the direction for the path of travel and the direction to an exit is not obvious. Lighted directional signs shall be provided with either battery backup or uninterruptable power supply systems and shall be continuously illuminated.	Within 1 month



32	Fire Alarm & Detection System (FADS)	The fire alarm system is antiquated, not a listed system and does not provide alarm and notification features consistent with acceptable standards. Location: All Buildings.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72. Submit the proposed fire alarm 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/ 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. Complete the fire alarm installation as per NFPA 72. Submit drawings, testing records, equipment certification and other relevant documentation to the RSC prior installation for review.	Design within 2 months and modification/ installation with 4 months
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33	Fire detection system inspection, testing and maintenance	Inspection, testing and maintenance for the fire alarm 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.s.	Within 1 month after installation

34	Fire Suppression System (SUPS)	Factory building-1 (Steel Shed) (Interim Structure) is attached with 5-storied RCC building (Factory Building-2) which has a highest occupiable floor height 59 feet approximately; additionally, both the shed (Factory building-1) and the building (Factory building-2) share the same egress arrangements, placing them within the same fire compartment. Since a standpipe system is required for Factory Building-2, it is also required for Factory Building-1. The required standpipe system is not installed in accordance with the RSC Technical Guidelines (Standard)¹ V1.0. Location: Factory Building-1 & Factory Building-2.	Installation of the Standpipe system shall be in accordance with RSC Technical Guidelines (Standard)¹ V1.0. 5.4 and NFPA 14. Submit the standpipe system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guidelines (Standard)¹ V1.0. and NFPA 14, 20, 22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design within 2 months and modification/ installation with 4 months
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35	Standpipe system inspection, testing and maintenance	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.s.	Within 1 month after installation
36	Fire Extinguishers ITM	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and RSC standards.	Within 1 month

37	No smoking signs	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.	Within 1 month
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