

INITIAL FIRE SAFETY INSPECTION REPORT

Factory Name: ECHOTEX LTD. (Extension 2)

RSC ID: 24587

ADDRESS: Chandra, Palli Biddut, Kaliakoir, Gazipur-1751, Bangladesh.

Other Factories: Echotex Ltd. (ID: 9483), Echotex (Extension) (ID: 12599) and Echotex Ltd. (New Building) (ID: 23528)



Inspected By: Md. Ferdaus Jaman and Mahbub Alam Sami

Date: 11 March 2024

Fire Safety Inspection Report

Factory Name: ECHOTEX LTD. (Extension 2)

Introduction:

ECHOTEX LTD. (Extension 2) complex was surveyed for fire safety on **11/03/2024** 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):

Factory Building name(s): There are total 13 structures in the factory compound under this RSC ID. The buildings are as below:

1. Multipurpose Building-2 (Main Production Building 2): The structure is a nine-storied RCC building with basement, (B+G+8). Construction of the building was started in January 2021 and completed in December 2023. The building has been occupied since May 2023. Each floor area is approximately 3586 sqm. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated on 1 December 2022. DIFE approval date: 17 September 2023. Construction period: New
2. Office Building: The structure is a partially eight storied RCC building with a partially occupied roof at east side, (G+7). The construction of the building was started in October 2013 and completed in January 2017. The building has been occupied since June 2017. Each typical floor area is approximately 558 sqm. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 20 June 2013. DIFE approval date: 19 September 2021. Construction period: Interim.
3. Old Utility Building: A seven-storied RCC building, (G+6). The building was constructed from April 2004 to January 2006 and production started in December 2006. The floor area is approximately 120 sqm. per floor. There is a PVC water tank (3000L) and an overhead water tank on the roof. There is a seven storied steel stair adjacent to the building. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 25 April 2006. DIFE approval date: 19 September 2021. Construction period: Existing.
4. Medical & Childcare Shed: A single-storied (G) RC building with steel roof truss shed. The building was constructed from January 2009 to March 2009 and production started in April 2009. The floor area is approximately 426 sqm. The floor is being used for Medical and Childcare. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 20 June 2013. DIFE approval date: 19 September 2021. Construction period: Existing.
5. Wastage Shed: The structure is a single-storied steel roof truss shed. The construction of the building was started in January 2020 and completed in March 2020. The building has been occupied since April 2020. The structure is being used for a wastage area. The floor area is approximately 465 sqm. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 27 March 2014. DIFE approval date: 19 September 2021. Construction period: Interim.

6. Dining Shed: A single-storied (G) steel shed. The building was constructed from January 2018 to May 2018 and production started in June 2018. The floor area is approximately 2325 sqm. The floor is used for worker's dining, dish wash and prayer space. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 20 March 2018. DIFE approval date: 19 September 2021. Construction period: Interim.
7. Kitchen Shed: A single-storied (G) steel shed. The building was constructed from January 2018 to February 2018 and production started in March 2018. The floor area is approximately 251 sqm. The floor is being used for the kitchen and boiler. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 20 March 2018. DIFE approval date: 19 September 2021. Construction period: Interim.
8. RMS Room: This is a single storied masonry structure (steel deck slab supported by brick wall). The construction of the building was started in January 2009 and completed in March 2009. The structure has been occupied since April 2009. The structure is being used for RMS room. The floor area is approximately 112 sqm. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 12 March 2017. DIFE approval date: 19 September 2021. Construction period: Existing.
9. ETP Building: This is a two storied RC building with lightweight steel roof. Construction of the building was started in January 2008 and completed in December 2008. The structure has been occupied since January 2009. The structure is being used for ETP, Lab Room, office. The floor area is approximately 2314 sqm. Permit layout drawing from the Kaliakoir Pouroshova, Gazipur (local authority) dated 27 March 2014. DIFE approval date: 19 September 2021. Construction period: Existing.
10. LPG Station Shed: A single-storied RC building with lightweight steel roof shed. The building was constructed from January 2022 to April 2022 and production started in May 2022. The floor is being used for LPG station. Construction period: New.
11. Connecting Bridge 1 (Between Factory Building & Multipurpose Building): Self-supported steel beam-column frame with bracing and bolted connection. The structure was constructed from June to September 2021 and occupied in October 2021. Construction period: New.
12. Connecting Bridge 2 (Between Multipurpose Building & Dyeing Building): Self-supported steel beam-column frame with bolted connection. The structure was constructed from June to August 2020 and occupied in September 2020. Construction period: Interim.
13. Connecting Bridge 3 (Between Multipurpose Building-2 & Dyeing Building): Self-supported RC beam-column frame with two-way spanning slab. The structure was constructed from January to April 2021 and occupied in June 2021. Construction period: New.

Factory Address: Chandra, Palli Biddut, Kaliakoir, Gazipur-1751, Bangladesh.

Points of contact:

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Findings & Recommendations :

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

Table-1:

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	Multipurpose Building-2 The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated 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 The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months



F-2	Fire Rated Construction	Multipurpose Building-2 Elevator shafts are directly open into the inside of floor area on several floors.	Modify the elevator shaft as per RSC Technical Guideline (Standard) V1-6.14.3. Elevator shaft shall be 2-hr fire rated opening protection from factory floor.	Within 6 months
				

F-3	Fire Rated Construction	Multipurpose Building-2 Unsealed penetrations and openings are located in the fire rated floor/ceiling assemblies. Followings are the description of openings or penetrations indicating specific locations: 1. Proposed BBT riser through floor slabs from ground floor to top floor of the building. 2. Passing of IT/Network cable riser through floor slabs from ground floor to top floor of the building. 3. Plastic pipes penetrate the floor slabs in toilet block of the building. 4. Steamline/GI pipes penetrate the floor slabs of the building. 5. Plastic pipes of wastage water discharge penetrate the floor slabs of the building. 7. Electrical cable riser through rated walls on several floors of the building. 8. Plastic pipes penetrate the floor slabs for rain water discharge from roof floor of the building.	Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation at least by 3-hr. The used sealer shall be 3rd party certified and installation shall be as per manufacturer's datasheet. Or Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months
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F-4	Fire Rated Construction	Multipurpose Building-2 Storage discharges directly into the exit stair discharge.	Openings from exit enclosure to storage room, 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 side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 4 months
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F-5	Fire Rated Construction	Multipurpose Building-2 Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: On ground and basement floor.	Provide defined storage areas and limit the storage arrangement as follows: - 1. General Condition: Maximum height of 2.4m and maximum area of 23m². Separate areas of unenclosed combustible storage by a minimum clear distance of 3m. 2. If sprinkler protected: maximum height of 3.66m and maximum area of 93m². Separate areas of unenclosed combustible storage by a minimum clear distance of 3m. or 3. Enclose the storage area from the surrounding occupancy with a minimum 1-hour construction.	Within 3 months
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F-6	Fire Rated Construction	Multipurpose Building-2 Exit or access pathway of fire pump room is not separated from surrounding occupancy by fire rated construction on basement floor.	Provide access/exit discharge way/vestibule directly outside or through a 1-hr rated exit corridor for fire pump room. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 4 months
				

F-7	Means of Egress	Multipurpose Building-2 Fire evacuation maps are not posted at the entrance to each exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-8	Means of Egress	Multipurpose Building-2 Building did not have stair designation signs or occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month
F-9	Means of Egress	Multipurpose Building-2 Handrails/Guards are not provided as per The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	New and interim 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. 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

F-10	Means of egress	Multipurpose Building-2 Parapets or guards are provided in occupied roof which is less than 1067mm (42 inch.).	Provide parapets or guards with a minimum height of 1067mm (42 inch.).	Within 3 months
F-11	Egress Lighting (ITM)	Multipurpose Building-2 Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months
F-12	Fire Alarm & Detection system	Multipurpose Building-2 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the buildings in accordance with review comment, Accord/ 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. 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 within 4 months

F-13	Fire Alarm & Detection system (ITM)	Multipurpose Building-2 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
F-14	Fire Protection System (Sprinkler & Standpipe)	Multipurpose Building-2 The high-rise building has an occupied floor greater than 23 meter (75 feet) and is provided with automatic sprinkler protection along with standpipe system. The automatic sprinkler and standpipe system installation requires detailed review to confirm compliance with NFPA 13, 14, 20, 22, 24 and the RSC Technical Guidelines (Standard).	Submit as built drawings, testing records, listing information and other relevant documentation to the RSC for review and approval, modification shall have to done as per the reviewed design (if required). Class-I standpipe system is acceptable with automatic sprinkler system.	Design Review within 2 months and installation within 4 months
F-15	Fire Protection System (ITM of fire pump)	Multipurpose Building-2 Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)

F-16	Fire Protection System (ITM)	Multipurpose Building-2 Inspection, testing, and maintenance for the Sprinkler and Standpipe system is not in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the Sprinkler and Standpipe system in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-17	Fire Extinguishers (ITM)	Multipurpose Building-2 Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and The RSC Technical Guidelines (Standard).	Within 3 months
F-18	Human Element Program	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 week
F-19	Human Element Program	Hot-work permit policy was not found in the factory.	A hot-work permit system in accordance with NFPA 51B shall be provided for any construction in an occupied facility.	Within 1 week

F-20	Fire Rated Construction	Office Building The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated 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 The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months
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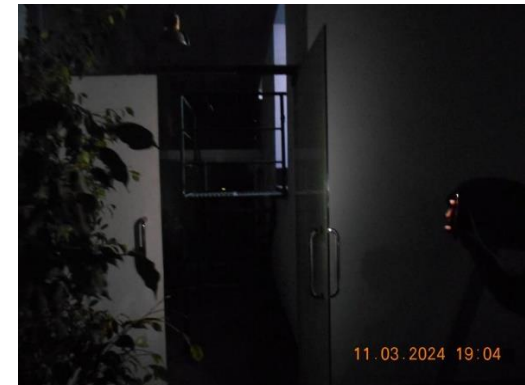
F-21	Fire Rated Construction	Office Building Elevator shafts are directly open into the inside of floor area on several floors.	Modify the elevator shaft as per RSC Technical Guideline (Standard) V1-6.14.3. Elevator shaft shall be 2-hr fire rated opening protection from factory floor.	Within 6 months
				

F-22	Fire Rated Construction	Office Building Unsealed penetrations and openings are located in the fire rated floor/ceiling assemblies. Followings are the description of openings or penetrations indicating specific locations: 1. Passing of IT/Network cable riser through floor slabs from ground floor to top floor of the building. 2. Plastic pipes penetrate the floor slabs in toilet block of the building. 3. Electrical cable riser through rated walls on several floors of the building.	Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation at least by 3-hr. The used sealer shall be 3rd party certified and installation shall be as per manufacturer's datasheet. Or Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months
				

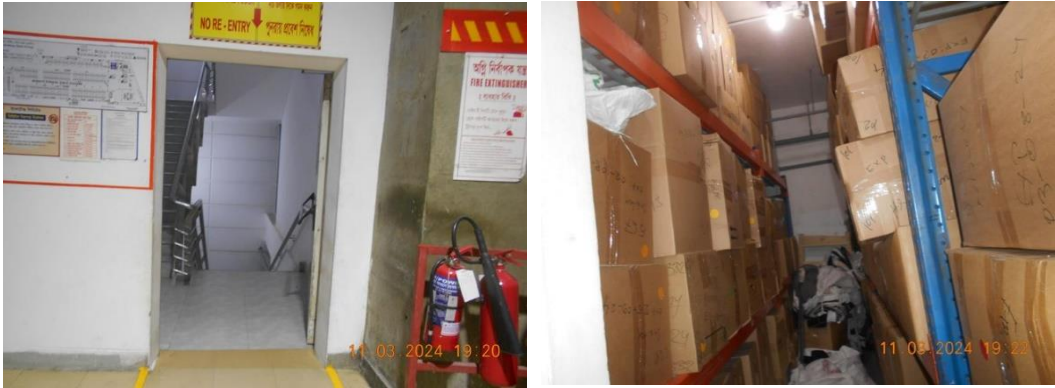
F-23	Fire Rated Construction	Office Building Exit discharge path of stair-1 is not separated from the openings of 1st floor.	Provide a minimum 2-hr fire rated separation from the 1st floor to exit discharge path of stair-1. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months
				
F-24	Fire Rated Construction	Office Building Exterior exit stairs are not properly separated from the building and stair exit discharge.	Exterior exit stairs shall be separated from the building with a rating requirement of 2 hr fire rating for 4 or more stories. The rating of the exterior wall shall extend 3.05 m (10 ft) beyond the ends of the stair structure.	Within 3 months

				
F-25	Fire Rated Construction	Office Building Ground, 1st and 2nd floor of Office building and adjacent Dyeing Shed is not separated.	Separate the ground, 1st and 2nd floor of Office building and adjacent Dyeing Shed as per BNBC 2006 Table 3.2.2	Within 3 months
				

F-26	Fire Rated Construction	Office Building Unprotected openings in the exterior wall in two consecutive floors throughout several floors.	Permitted unprotected openings in the exterior wall in two consecutive floors lying within 1.5 m laterally or vertically shall be separated with 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 more details see article 3.1.9.2 of BNBC 2020.	Within 3 months
 				
F-27	Means of Egress	Office Building Single exit stair was observed for occupied roof floor (Gym room-7th floor) which is not comply the requirment of The RSC Technical Guidelines (Standard).	Untill provide aditional exit stair the roof floor shall be vacant. Provide minimum 2 exit stairs for buildings more than 2 stories unless single exit is permissible considering maximum travel distance and maximum load of occupants according to BNBC Part 4 Section 3.14.3.	Vacant the roof floor within 7 days Provide additional exit stair within 6 months



F-28	Means of Egress	Office Building Fire evacuation maps are not posted at the entrance to each exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-29	Means of Egress	Office Building Building did not have stair designation signs or occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month

F-30	Means of Egress	Office Building Storage was located in exit stair-1.	Remove storage from the exit stairs and egress path and Keep egress path and stair clear of storage.	Immediately
				
F-31	Egress Lighting (ITM)	Office Building Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months

F-32	Fire Alarm & Detection system	Office Building Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the buildings in accordance with review comment, Accord/ 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. 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 within 4 months
F-33	Fire Alarm & Detection system (ITM)	Office Building Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)

F-34	Fire Protection System (Sprinkler & Standpipe)	Office Building The high-rise building has an occupied floor greater than 23 meter (75 feet) and is provided with automatic sprinkler protection along with standpipe system. The automatic sprinkler and standpipe system installation requires detailed review to confirm compliance with NFPA 13, 14, 20, 22, 24 and the RSC Technical Guidelines (Standard).	Submit as built drawings, testing records, listing information and other relevant documentation to the RSC for review and approval, modification shall have to be done as per the reviewed design (if required). Class-I standpipe system is acceptable with automatic sprinkler system.	Design Review within 2 months and installation within 4 months
F-35	Fire Protection System (ITM of fire pump)	Office Building Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-36	Fire Protection System (ITM)	Office Building Inspection, testing, and maintenance for the Sprinkler and Standpipe system is not in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the Sprinkler and Standpipe system in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)

F-37	Fire Extinguishers (ITM)	Office Building Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and The RSC Technical Guidelines (Standard).	Within 3 months
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F-38	Fire Rated Construction	Old Utility Building The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated 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 The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months
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F-39	Fire Rated Construction	Old Utility Building Unsealed penetrations and openings are located in the exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separations.	Within 3 months
				
F-40	Means of Egress	Old Utility Building Exit access corridors are not provided with 1 hr. fire resistance rating or approved NFPA 13 sprinkler system on the ground floor.	Provide exit access corridors with 1 hr. fire resistance rating or approved NFPA 13 sprinkler system.	Within 3 months

				
F-41	Means of Egress	Old Utility Building Storage was located in exit stair-1.	Remove storage from the exit stairs and egress path and Keep egress path and stair clear of storage.	Immediately



F-42	Means of Egress	Old Utility Building Handrails/Guards are not provided as per The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	New and interim 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. 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
F-43	Means of Egress	Old Utility Building Fire evacuation maps are not posted at the entrance to each exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month

F-44	Means of Egress	Old Utility Building Building did not have stair designation signs or occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month
F-45	Means of Egress	Old Utility Building Handrails/Guards are not provided as per The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	New and interim 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. 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
F-46	Egress Lighting (ITM)	Old Utility Building Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months

F-47	Fire Alarm & Detection system	Old Utility Building Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the buildings in accordance with review comment, Accord/ 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. 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 within 4 months
F-48	Fire Alarm & Detection system (ITM)	Old Utility Building Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)

F-49	Fire Protection System (Standpipe)	Old Utility Building The standpipe system installation requires detailed review to confirm compliance with NFPA 14, 20, 22, 24 and RSC Technical Guideline (Standard).	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 Guideline (Standard) and NFPA 14, 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design Review within 2 months and installation within 4 months.
F-50	Fire Protection System (ITM of fire pump)	Old Utility Building Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-51	Fire Protection System (ITM)	Old Utility Building Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the Standpipe system in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)

F-52	Fire Extinguishers (ITM)	Old Utility Building Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and The RSC Technical Guidelines (Standard).	Within 3 months
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F-53	Fire Rated Construction	Wastage shed Rooms used for combustible storage are not properly separated by fire rated construction due to unprotected openings and penetrations from dining and prayer shed.	Separate or seal the unprotected openings and penetrations of the storage rooms by a minimum 1-hr fire rated construction from surrounding occupancy.	Within 3 months
				
F-54	Fire Rated Construction	Kitchen and boiler shed The boiler and kitchen area is not separated by fire rated construction (openings, non-rated doors, penetrations)	Separate the boiler and kitchen room by a minimum 2-hr fire rated construction. Seal and/or protected all openings to maintain fire separations.	Within 3 months



F-55	Fire Rated Construction	An underground Diesel storage tank along with 10000 L diesel fuel storage has been found in the factory premise.	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. The licenses must be prominently posted and kept up to date. Proper fire risk assessment along with precautionary action shall be taken. Also, Take corrective action as per table 3.2.7 and article 2.13.2.3 of BNBC 2006 (if applicable).	Within 6 months
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F-56	Fire Rated Construction	LPG gas station (with vaporization) and LPG Gas cylinders near Kitchen shed LPG gas station (with vaporization) and LPG Gas cylinders were located within the factory premise.	The storage or use of liquefied or compressed flammable gas cylinders shall be prohibited within the factory building. Or, LPG/CNG cylinders are permitted to be stored in a separate dedicated building on the factory premises within its boundaries if the building meets the following conditions: 1. The storage building must be at least 3 meters away from any other building and boundaries. 2. The exterior walls of the building must have a fire resistance rating of 3 hours using noncombustible construction. 3. Doors and other openings in the exterior walls must be protected with suitable closing devices having a fire protection rating of 3 hours. 4. The building is to be used for no other purpose than the storage of LPG/CNG cylinders. 5. The building must be mechanically ventilated to control the accumulation of flammable vapors. 6. The installations must be approved and accepted by the requirements of the AHJ, Gas supply company regulations, manufacturers/supplier's instructions/guidance, CIOB and all other applicable agencies, codes and standards.	Within 6 months
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F-57	Egress Lighting (ITM)	Dining and prayer shed, Wastage shed, Kitchen and boiler shed, RMS room, ETP building and Connecting bridges Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months
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F-58	Fire Alarm & Detection system	Dining and prayer shed, Wastage shed, Kitchen and boiler shed, RMS room, ETP building and Connecting bridges Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the buildings in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. 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 within 4 months
F-59	Fire Extinguishers (ITM)	Dining and prayer shed, Wastage shed, Kitchen and boiler shed, RMS room, ETP building and Connecting bridges Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and The RSC Technical Guidelines (Standard).	Within 3 months
F-60	Human Element Program	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 week