

FIRE SAFETY INSPECTION REPORT

AKH KNITTING & DYEING LTD.

ACCORD ID: 9210

92 PHULBARIA, TETULJHORA, SAVAR; DHAKA;

OTHER FACTORIES: NONE



SUMMARY

AKH Knitting & Dyeing LTD. was surveyed for fire safety on 3/28/2015 by Jensen Hughes. This summary identifies the major deficiencies that were identified during the inspection.

The purpose of this survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the Accord. 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.

Tables 1 - 5 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 Accord for approval.

Table 1. Findings And Recommendations - Building 1

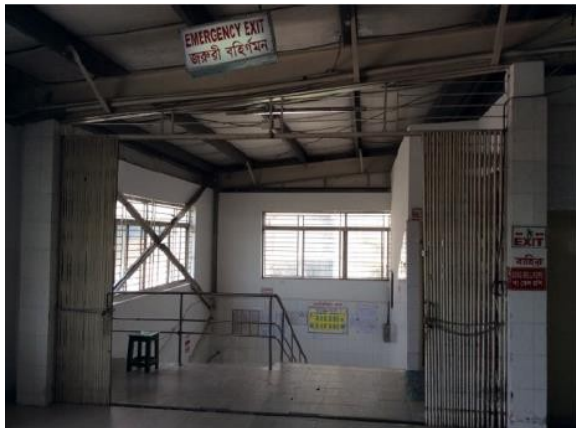
No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Diesel fuel storage was located inside the generator room.	Remove all diesel fuel storage from the generator room and relocate to the exterior such that the diesel fuel storage is at least 10 ft. from required egress paths. If located along egress paths or in a utility building, provide the diesel fuel storage with 2-hr fire rated construction. There shall be no diesel fuel storage in a factory production building.	Immediately
F-2	Fire Rated Construction	The boiler room is not separated by fire-rated construction due to (openings, non-rated doors, penetrations). The boilers are located in building 2, which is in between Building 1 to its east and Building 3 to its west.	Separate the boiler room by a minimum 1-hr fire rated construction for non-high rise. Seal and/or protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months



F-3	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction. Locations: Multiple floors in factory areas.	Provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months
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F-4	Fire Rated Construction	The exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction.	Provide minimum 1-hr rated doors for buildings with 3 or fewer 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.	Within 3 months
			If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.	





F-5	Fire Rated Construction	Unsealed electrical and mechanical shafts are located in the fire-rated floor/ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level and seal all penetrations in floor/ceiling assemblies to maintain the fire separation.	Within 3 months
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F-6	Fire Rated Construction	Unsealed penetrations and openings are located in exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Within 3 months
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F-7	Fire Rated Construction	Two bridges reported as exits, connecting Building 1 to Building 7 on the First and Second floors, are not enclosed in fire-rated construction.	Enclose the exits such that the separation between buildings is provided by a fire wall or fire barrier having minimum 1-hr fire rated construction. Provide fire doors and opening protectives consistent with the fire-rating of the wall or barrier. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.	Within 3 months
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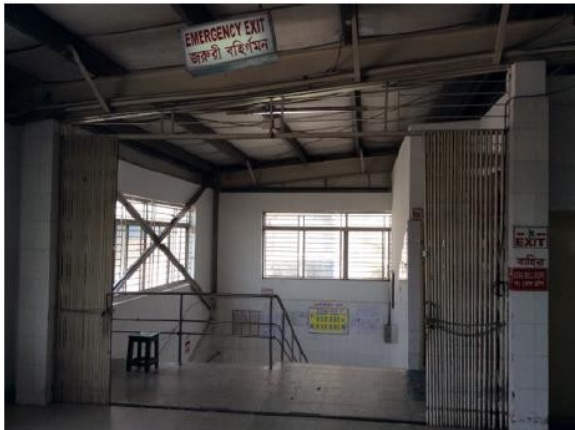
F-8	Fire Rated Construction	The compressor room is not separated by fire-rated construction due to openings and non-rated doors on the first floor.	Separate the compressor room by a minimum 1-hr fire-rated construction for non-high rise. Seal and protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months
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F-9	Egress	Egress doors / gates with locking features are provided at building exits, exit stairs, along egress routes and exit discharge. Locations: Collapsible gates and sliding doors on all floors. Doors were open and unlocked during the inspection.	Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately
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F-10	Egress	Building did not have stair designation signs at exit stairs. Building did not have occupant load signs on the factory floors.	Provide stair designation signs, occupant load signs and emergency evacuation plans at required locations.	Immediately
F-11	Egress	Collapsible gates / sliding doors are provided at building exits, along egress routes and exit discharge. Locations: Collapsible gates and sliding doors on all floors.	Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month



F-12	Egress	Handrails are not provided on both sides of the exit stairs.	Provide handrails on both sides of the exit stairs. 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-13	Fire Protection	The fire alarm system is antiquated, not a listed system and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-14	Fire Protection	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.	Within 3 months
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F-15	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
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F-16	Fire Protection	Fire department connection is not provided.	Provide fire department connection in accordance with ACCORD standard 5.5.4.	Within 3 months
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F-17	Fire Protection	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20.	Within 3 months
F-18	Fire Protection	The fire alarm system does not appear to provide adequate audible notification coverage. Locations: All locations and functional test was performed.	Provide additional notification appliances such that the fire alarm system is audible throughout the building in accordance with NFPA 72.	Within 6 months



F-19	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months
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F-20	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.	Within 9 months
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F-21	Egress Lighting	Exit signage was not provided at exit. Locations: The bridge exits to Building 7 on the first and second floors are not marked with illuminated exit signage or not marked as an exit. It was reported that these are used as exits and the emergency plans also credit the bridges as exits.	Provide exit signs above all building exits to the exterior, all doors to the exit stairs and along all paths of travel where a change of direction is not obvious.	Within 1 month
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F-22	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Locations: All areas.	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 3 months
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F-23	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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Table 2. Findings And Recommendations - Building 3

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction. The locations were ground floor and maisonette areas on the building.	Provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months



F-2	Fire Rated Construction	Exit access corridors are not provided with 1 hr. fire resistance rating or approved NFPA 13 sprinkler system.	Provide exit access corridors with 1 hr. fire resistance rating or approved NFPA 13 sprinkler system.	Within 3 months
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F-3	Fire Rated Construction	Hazardous materials area is not separated by fire-rated construction due to openings and non-rated doors.	Separate the hazardous materials and flammable liquid storage room by a minimum 2-hr fire-rated construction. Seal and/or protect all openings to maintain the required fire separations.	Within 3 months
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F-4	Egress	Egress doors and gates with locking features are provided at building exits. Doors were open and unlocked during the inspection.	Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately
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F-5	Egress	Building did not have occupant load sign on the factory floor.	Provide occupant load signs and emergency evacuation plans at required locations.	Immediately
F-6	Egress	Collapsible gates and sliding doors are provided at building exits throughout the building.	Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month



F-7	Fire Protection	The fire alarm system is antiquated, not a listed system and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-8	Fire Protection	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 months
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F-9	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
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F-10	Fire Protection	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20.	Within 3 months
F-11	Fire Protection	Fire department connection is not provided.	Provide fire department connection in accordance with ACCORD standard 5.5.4.	Within 3 months
F-12	Fire Protection	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.	Within 3 months
F-13	Fire Protection	Visible notification was not provided for the building in accordance with NFPA 72.	Provide visible and audible notification for the building in accordance with NFPA 72.	Within 3 months
F-14	Fire Protection	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records on-site, in accordance with NFPA 10.	Within 3 months
F-15	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months



F-16	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.	Within 9 months
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F-17	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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Table 3. Findings And Recommendations - Building 7

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Unsealed penetrations and openings are located in exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Within 3 months



F-2	Fire Rated Construction	The exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction.	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.	Within 3 months
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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 ACCORD standard 6.8.3.1.



F-3	Fire Rated Construction	Unsealed openings and penetrations are located in the fire-rated wall and ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level and seal all penetrations in floor/ceiling assemblies to maintain the fire separation.	Within 3 months
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F-4	Fire Rated Construction	The boiler room is not separated by fire-rated construction due to (openings, non-rated doors, penetrations). The boilers is located on the First floor.	Separate the boiler rooms by a minimum 2-hr fire rated construction for high rise. Seal and/or protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months
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F-5	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction. Locations: Multiple floors in factory areas.	Provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months
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F-6	Egress	Exit capacity is not adequate for the occupant load. Occupant load on Second (465 persons) and Third floors (422 persons) exceeds the available discharge capacity (406 persons). In addition, the building does not have an adequate exit capacity (406 persons) or number of exits (currently two) to serve the large reported occupant load (1/3 of the total Building 1 and 7 occupant loads, 903 persons) of the sixth floor dining area.	Reduce occupant load immediately to not more than available exit capacity (406). Provide additional exits in the future to increase exit capacity.	Immediately
F-7	Egress	Egress doors / gates with locking features are provided at building exits, exit stairs, along egress routes, exit discharge. Locations: Collapsible gates and sliding doors on all floors. Doors were open and unlocked during the inspection.	Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately



F-8	Egress	Building did not have stair designation signs at exit stairs. Building did not have occupant load signs on the factory floors.	Provide stair designation signs, occupant load signs and emergency evacuation plans at required locations.	Immediately
F-9	Egress	Storage was located in the egress path. Location: Various locations on multiple floors.	Keep egress paths and stairs clear of storage.	Immediately



F-10	Egress	Collapsible gates / sliding doors are provided at building exits, exit stairs, along egress routes, exit discharge. Locations: Collapsible gates and sliding doors on all floors.	Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month
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F-11	Egress	Handrails are not provided on both sides of the exit stairs.	Provide handrails on both sides of the exit stairs. 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	Egress	Egress door serving 50 or more occupants does not swing in the direction of egress travel. Location: Egress door to the office and administrative spaces on the ground floor.	Modify the egress door to swing in the direction of egress travel.	Within 3 months



F-13	Egress	The width of egress aisles is less than 36-in. Location: Between workstation areas in various locations in the building.	Provide minimum aisle widths of 36-in.	Within 3 months
		 		
F-14	Egress	The number of required exits is not present in factory on the sixth floor.	The number of means of egress from any floor or story shall not be at less than 2 unless it meets ACCORD standard 6.6.2. When load exceeds 500 occupants the number of means of egress shall be at least 3. When load exceeds 1000 occupants the number of means of egress shall be at least 4.	Within 6 months
F-15	Fire Protection	The fire alarm system is antiquated, not a listed system and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months



F-16	Fire Protection	The high-rise building has an occupied floor greater than 23m (75 ft.) and is not provided with automatic sprinkler protection. The large occupant loads, heavy fuel loading and anticipated extended egress times warrant sprinkler protection.	Provide automatic sprinkler protection throughout the building in accordance with NFPA 13.	Design within 6 months, install within 12 months
F-17	Fire Protection	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 months

F-18	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
F-19	Fire Protection	Fire department connection is not provided.	Provide fire department connection in accordance with ACCORD standard 5.5.4.	Within 3 months
F-20	Fire Protection	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20.	Within 3 months
F-21	Fire Protection	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.	Within 3 months
F-22	Fire Protection	Visible and audible notification was not provided for the building in accordance with NFPA 72.	Provide visible and audible notification for the building in accordance with NFPA 72.	Within 3 months
F-23	Fire Protection	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records on-site, in accordance with NFPA 10.	Within 3 months

F-24	Fire Protection	The required standpipe system is not installed in accordance with the ACCORD standard.	Install a new standpipe system in accordance with ACCORD standard 5.4 and NFPA 14.	Within 6 months
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A class III system shall be installed in buildings with the highest occupiable floor 10 m (33 ft.) above grade or more. A class I system shall be permitted in buildings protected throughout by an approved automatic sprinkler system.



F-25	Fire Protection	The fire alarm system does not appear to provide adequate audible notification coverage.	Provide additional notification appliances such that the fire alarm system is audible throughout the building in accordance with NFPA 72.	Within 6 months
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Location:
All locations and functional test was performed.



F-26	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months
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F-27	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.	Within 9 months
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F-28	Egress Lighting	The dining area on the Sixth floor of the building has two exit stairs and two doorways labeled as exits. These two doorways lead to an open area of the roof in which no exit stairs or exit access are located. Therefore, only the two exit stairs serving the dining area are credited.	Remove exit signs from noted areas to avoid confusion from actual exits. Update the emergency plans accordingly.	Immediately
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F-29	Egress Lighting	Exit signage was not provided at a building exit. Location: Doors used to exit the office and administrative space on the ground floor.	Provide exit signs above all building exits to the exterior, all doors to the exit stairs and along all paths of travel where a change of direction is not obvious.	Within 1 month
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F-30	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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Table 4. Findings And Recommendations - Building 8

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Unsealed penetrations and openings are located in exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Within 3 months



F-2	Fire Rated Construction	The exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction.	Provide minimum 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. 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 ACCORD standard 6.8.3.1.	Within 3 months
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F-3	Fire Rated Construction	Unsealed electrical shafts are located in the fire-rated floor and ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level and seal all penetrations in floor/ceiling assemblies to maintain the fire separation.	Within 3 months
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F-4	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor and ceiling assemblies.	Seal all penetrations and openings in floor and ceiling assemblies to maintain the fire separation.	Within 3 months
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F-5	Fire Rated Construction	The service elevator does not have the proper fire rating for the shaft and elevator door.	Provide the proper 2 hr. fire rating for the shaft and 1.5 hr. fire rating for the elevator door.	Within 3 months
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F-6	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction. These areas were located in multiple floors in factory areas.	Provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m ² (250 ft ²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m ² (305ft ²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months
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F-7	Egress	Egress doors and gates with locking features are provided at building exits, exit stairs, along egress routes and exit discharge. The collapsible gates and sliding doors on all floors. Doors were open and unlocked during the survey.	Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately
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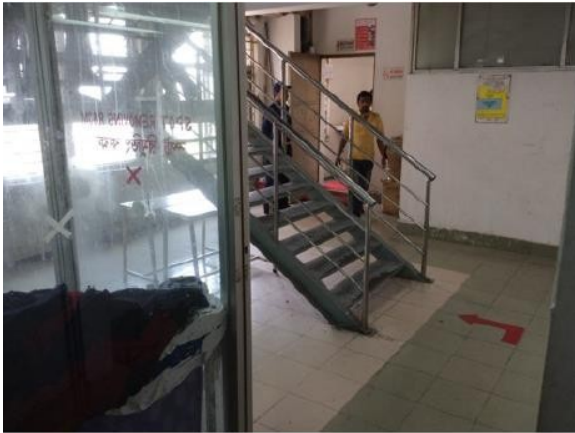


F-8	Egress	Building did not have stair designation signs at the exit stairs. Building did not have occupant load signs at on the factory floors.	Provide stair designation signs, occupant load signs and emergency evacuation plans at required locations.	Immediately
F-9	Egress	Collapsible gates and sliding doors are provided at building exits, exit stairs, along egress routes and exit discharge. Location: On all floors.	Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month



F-10	Egress	Handrails are not provided on both sides of the exit stairs.	Provide handrails on both sides of the exit stairs. 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-11	Egress	Exit stairs discharge inside the building.	Modify stair to discharge directly outside. Or provide 2-hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas).	Within 6 months
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F-12	Fire Protection	The fire alarm system is antiquated, not a listed system and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-13	Fire Protection	The high-rise building has an occupied floor greater than 23m (75 ft.) and is not provided with automatic sprinkler protection. The large occupant loads, heavy fuel loading and anticipated extended egress times warrant sprinkler protection.	Provide automatic sprinkler protection throughout the building in accordance with NFPA 13.	Design within 6 months, install within 12 months
F-14	Fire Protection	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 months

F-15	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
F-16	Fire Protection	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20.	Within 3 months
F-17	Fire Protection	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.	Within 3 months
F-18	Fire Protection	Visible notification was not provided for the building in accordance with NFPA 72.	Provide visible notification for the building in accordance with NFPA 72.	Within 3 months
F-19	Fire Protection	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records on-site, in accordance with NFPA 10.	Within 3 months

F-20	Fire Protection	The required standpipe system is not installed in accordance with the ACCORD standard.	Install a new standpipe system in accordance with ACCORD standard 5.4 and NFPA 14.	Within 6 months
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A class III system shall be installed in buildings with the highest occupiable floor 10 m (33 ft.) above grade or more. A class I system shall be permitted in buildings protected throughout by an approved automatic sprinkler system.



F-21	Fire Protection	The fire alarm system does not appear to provide adequate audible notification coverage.	Provide additional notification appliances such that the fire alarm system is audible throughout the building in accordance with NFPA 72.	Within 6 months
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Location:
All locations and functional test was performed.

F-22	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months
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F-23	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.	Within 9 months
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F-24	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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Table 5. Findings And Recommendations - Building 9

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Unsealed penetrations and openings are located in all exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Within 3 months



F-2	Fire Rated Construction	The exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction.	Provide minimum 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. 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 ACCORD standard 6.8.3.1.	Within 3 months
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F-3	Fire Rated Construction	Unsealed electrical shafts are located in the fire-rated floor/ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level and seal all penetrations in floor/ceiling assemblies to maintain the fire separation.	Within 3 months
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F-4	Fire Rated Construction	The north elevator does not have the proper fire rating for the shaft and elevator door within the west exit stair enclosure.	Provide the proper 2 hr. fire rating for the shaft and 1.5 hr. fire rating for the elevator door.	Within 3 months
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F-5	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction on ground, second and fifth floors.	Provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months
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F-6	Fire Rated Construction	Storage room discharges directly into exit stair enclosures on basement, fourth and sixth floors.	Openings from exit enclosure to storage 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 storage room side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 3 months
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F-7	Fire Rated Construction	The EMR room is not separated by fire-rated construction due to openings and non-rated doors within the exit stair enclosures.	Separate the EMR room by a minimum 2-hr fire rated construction for high rise. Seal and protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months
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F-8	Fire Rated Construction	The compressor room is not separated by fire-rated construction due to openings and non-rated doors on the ground floor.	Separate the compressor room by a minimum 2-hr fire rated construction for high rise. Seal and protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months
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F-9	Fire Rated Construction	Rooms used for combustible storage are not separated by fire-rated construction on basement, first, third, fourth and sixth floors.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months
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F-10	Egress	Egress doors with locking features are provided along egress routes. All doors were not open and unlocked during the survey.	Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately
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F-11	Egress	Building did not have stair designation signs at the exit stairs. Building did not have occupant load signs at on the factory floors.	Provide stair designation signs, occupant load signs and emergency evacuation plans at required locations.	Immediately
F-12	Egress	Storage was located in the east exit stair on the basement.	Remove all storage from exit stairs and egress paths.	Immediately



F-13	Egress	Sliding doors are provided at exit stairs and along egress routes.	Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month
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F-14	Egress	Handrails are not provided on both sides of the exit stairs and ramp.	Provide handrails on both sides of the exit stair and ramp. 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-15	Egress	Common path of egress travel exceeds limit on the fourth floor.	Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 23 m (75 ft.) or 30 m (100 ft.) when complete sprinkler protection is provided.	Within 3 months
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F-16	Fire Protection	The fire alarm system is antiquated, not a listed system and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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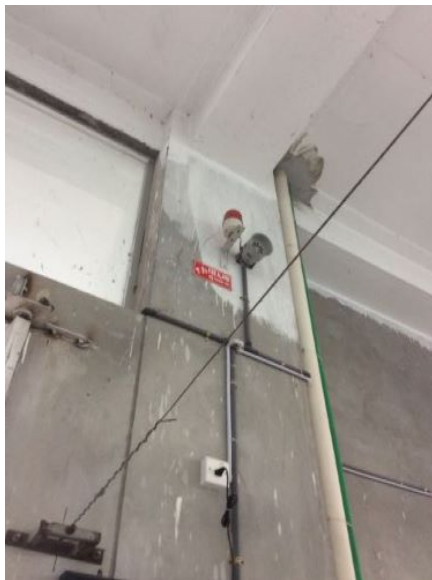
F-17	Fire Protection	The high-rise building has an occupied floor greater than 23m (75 ft.) and is not provided with automatic sprinkler protection. The large occupant loads, heavy fuel loading and anticipated extended egress times warrant sprinkler protection.	Provide automatic sprinkler protection throughout the building in accordance with NFPA 13.	Design within 6 months, install within 12 months
F-18	Fire Protection	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 months
F-19	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
F-20	Fire Protection	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20.	Within 3 months
F-21	Fire Protection	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.	Within 3 months

AKH Knitting & Dyeing Ltd
Bangladesh Ready Made Garment Exporters Association
FIRE CALL POINT STATUS
Date: 14.02.15

Sl. No	Unit & Floor	Location	Status	Remarks
01	Unit-01, Ground Floor	Right side of Gate-01	Active	
02	Unit-01, Ground Floor	Left side of Gate-01	Active	
03	Unit-01, Ground Floor	Right side of Gate-02	Active	
04	Unit-01, 1st Floor	West side of Gate-20	Active	
05	Unit-01, 2nd Floor	West side of Gate-20	Active	
06	Unit-02, Under Ground	Right side of Gate-09	Active	
07	Unit-02, Under Ground	West side of Gate-09	Active	
08	Unit-02, Ground Floor	West side of Gate-09	Active	
09	Unit-02, 1st Floor	Right side of Gate-04	Active	
10	Unit-02, 1st Floor	West side of Gate-04	Active	
11	Unit-02, 2nd Floor	Right side of Gate-05	Active	
12	Unit-02, 2nd Floor	West side of Gate-05	Active	
13	Unit-02, 2nd Floor	Left side of Gate-15	Active	
14	Unit-02, 2nd Floor	Right side of Gate-06	Active	
15	Unit-02, 3rd Floor	Right side of Gate-14	Active	
16	Unit-02, 3rd Floor	Left side of Gate-08	Active	
17	Unit-02, 4th Floor	Left side of Gate-03	Active	
18	Unit-02, 5th Floor	Right side of Gate-09	Active	
19	Unit-02, 5th Floor	Left side of Gate-12	Active	
20	Unit-02, 6th Floor	Left side of Gate-10	Active	
21	Unit-02, 6th Floor	West side of Gate-11	Active	
22	Unit-02, Under Ground	West side of Gate-05	Active	
23	Unit-02, Ground Floor	West side of Gate-03	Active	
24	Unit-02, 1st Floor	Unit-02 South side Gate	Active	
25	Unit-02, 1st Floor	West side of Gate-04	Active	

Fire Officer
Manager (Safety)
GM (Maintenance)

F-22	Fire Protection	Visible notification was not provided for the building in accordance with NFPA 72.	Provide visible notification for the building in accordance with NFPA 72.	Within 3 months
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F-23	Fire Protection	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records on-site, in accordance with NFPA 10.	Within 3 months
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F-24	Fire Protection	The required standpipe system is not installed in accordance with the ACCORD standard.	Install a new standpipe system in accordance with ACCORD standard 5.4 and NFPA 14.	Within 6 months
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A class III system shall be installed in buildings with the highest occupiable floor 10 m (33 ft.) above grade or more. A class I system shall be permitted in buildings protected throughout by an approved automatic sprinkler system.



F-25	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months
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F-26	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.	Within 9 months
F-27	Egress Lighting	Exit signage not illuminated on the mezzanine floor.	Regularly inspect all exit signage and replace/install lights as needed to illuminate signs. The source of illumination shall provide not less than 50 lux at the illuminated surface with a contrast of not less than 0.5. Approved self luminous signs which provide evenly illuminated letters having a minimum luminance of 0.2 cd/m ² may also be used.	Within 1 month



F-28 Egress Lighting

Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.

Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.

Within 3 months

AKH KNITTING AND DYEING LTD.
92, Phulbaria, Savar, Dhaka
GARMENTS DIVISION
EXIT LIGHT
UNIT: 02

MONTH: October

NTT/08

B-7

SL NO	FLOOR/AREA	ITEM	STATUS			TOTAL	REMARKS
			IPS	DIRECT	SWITCH CONNECTED		
1	6 FLOOR	EXIT LIGHT	✓			1	
2	5 TH FLOOR		✓	✓		2	
3	2 ND FLOOR		✓	✓		2	
4	3 RD FLOOR		✓			1	
5	4 TH FLOOR		✓			1	
6	5 TH FLOOR		✓			1	
7	6 TH FLOOR		✓			1	
8	7 TH FLOOR						
9	ROOF TOP			✓		1	
10	MINORAL			✓		1	
11	DAY CARE						
12	OTHERS						

Electrical Sup.

Maintenance Manager

F-29	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes on the factory floors.	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 3 months
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