

FIRE SAFETY INSPECTION REPORT

KAC FASHION WEAR LTD

12/13 TETUI BARI, SAVAR

OTHER FACTORIES: NONE



ACC  **RD**
on Fire and Building Safety in Bangladesh

August 11, 2014

SUMMARY

KAC Fashion Wear Ltd was surveyed for fire safety on 8/11/2014 by Hughes Associates, Inc. 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 - 4 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	Rooms used for combustible storage are not separated by fire-rated construction. Specifically, rooms on the ground (reserve storage room, carton store, waste storage) and first (sub store) floors.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months





F-2	Fire Rated Construction	Areas used for combustibles storage, open to the factory floor, are not separated by fire-rated construction. Specifically, areas on the ground and second floors.	<p>Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.</p> <p>Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> - Maximum height of 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² <p>Separate areas of unenclosed combustibles storage by a minimum clear distance of 3m.</p>	Within 3 months
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F-3	Fire Rated Construction	Both 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 and 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.	





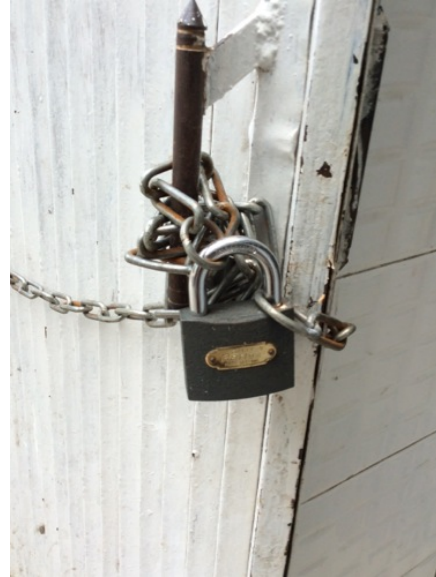
F-4	Fire Rated Construction	Unsealed penetrations are located in the northeast exit stair enclosure on the ground floor.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation, provide fire-rated shafts for electrical wiring.	Within 3 months
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F-5	Fire Rated Construction	The exit discharge path along the west side of the building, served by the southwest exit stair/building exit is less than 10 ft wide and not separated from the building interior.	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.	Within 6 months
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F-6	Egress	Egress doors and gates with locking features are provided at building exits, exit stairs, along egress routes and at exit discharge. All gates and 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.	Immediate
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F-7	Egress	Exit capacity of the first floor (385) is not adequate for the reported maximum occupant load (457).	Immediately reduce occupant load to not more than the available exit capacity (385). In the future if a greater occupant load is required, provide an additional exit.	Immediate
F-8	Egress	Storage was located in each exit stair on various floors.	Remove all storage from exit stairs and egress paths.	Immediate



F-9	Egress	Collapsible gates and sliding doors are provided at building exits, exit stairs, along egress routes and at exit discharge.	<p>Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors.</p> <p>If locks are required for security reasons, utilize special door locking features complying with NFPA 101.</p>	Within 1 month
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F-10	Egress	Common path of egress travel exceeds 30 m. and travel distance exceeds 60 m. from the exit discharge of the building to the exit discharge through the east factory wall.	Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 30 m.	Within 3 months
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F-11 Egress

After exit discharge from the building, a single means of egress is provided through the east factory wall.

After exit discharge from the building, provide an additional means of egress to exit the factory premise.

Within 3 months

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	Inspection, testing, and maintenance of 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-14	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 6 months
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F-15	Egress Lighting	Two (2) exit signs were observed to be missing along egress routes. One was to the southwest exit stair on the second floor and the other was along the egress route from the second floor dining area.	Provide exit signs above all exits to the exterior and all doors to the exit stairs.	Within 1 month
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F-16	Egress Lighting	An exit sign along the egress route from the second floor dining area to the southwest exit stair was not functional (burned out, broken, etc.).	Regularly inspect all exit signage and replace/install lights as needed to illuminate signs.	Within 1 month
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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 accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
F-18	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along all egress routes.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months

Table 2. Findings And Recommendations - Building 2

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	<p>A room used for combustible storage was not separated by fire-rated construction. Specifically the gray fabric store on the first floor.</p> <p>This storage room also discharges to the east exit stair.</p>	<p>Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.</p> <p>Provide a 2-hr fire-rated vestibule where the dedicated storage room discharges to the east exit stair. Supply a 1.5-hr fire door on the exit stair side and a 1-hr fire door on the storage room side.</p>	Within 3 months





F-2	Fire Rated Construction	Areas used for combustible storage, open to the factory floor, are not separated by fire-rated construction. Specifically, areas on the second floor.	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 2.4m and maximum area of 23m ² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m ² Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.	Within 3 months
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F-3	Fire Rated Construction	Both 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 and 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.	Within 3 months
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F-4	Fire Rated Construction	An unsealed penetration and opening is located in the west exit stair enclosure on the ground floor.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation, provide fire-rated shafts for electrical wiring.	Within 3 months
		The penetration is due to the generator, which regardless needs to be removed from the exit stair.		



F-5	Fire Rated Construction	Each exit stair was open to factory areas on some floors due to unenclosed stairwells.	Enclose each exit stair in 2-hr fire-rated construction on all floors.	Within 3 months
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F-6	Egress	Egress doors and gates with locking features are provided at exit stairs, along egress routes and at exit discharge. All gates and 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.	Immediate
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F-7 Egress

Storage was located in each exit stair on various floors.

Remove all storage from exit stairs and egress paths.

Immediate





F-8	Egress	Common path of egress travel exceeds 30 m. and travel distance exceeds 60 m. from the exit discharge of the building to the exit discharge through the east factory wall.	Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 30 m.	Within 3 months
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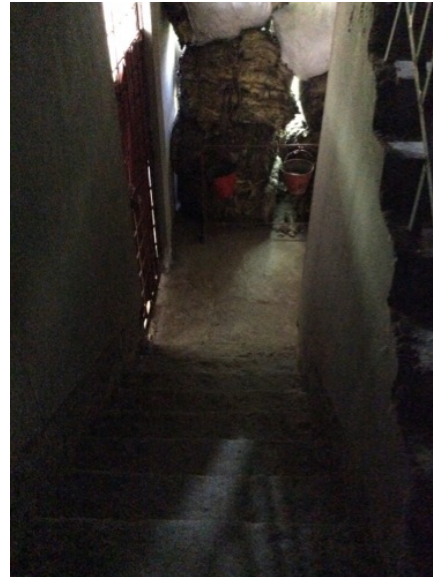




F-9	Egress	After exit discharge from the building, a single means of egress is provided through the east factory wall.	After exit discharge from the building, provide an additional means of egress to exit the factory premise.	Within 3 months
F-10	Egress	The egress doors from the first floor prayer and the west exit discharge do not swing in the direction of egress travel.	Modify the egress door to swing in the direction of egress travel.	Within 3 months



F-11	Egress	Handrails are not provided throughout the east exit stair.	Provide handrails on at least one side of exit stair.	Within 3 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	No fire alarm system components are present on the ground or second floor.	Provide a listed addressable fire alarm system throughout the building in accordance with NFPA 72.	Within 1 months
F-14	Fire Protection	Inspection, testing, and maintenance of 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-15	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 6 months





F-16	Egress Lighting	Exit signs were observed to be missing along egress routes. The second floor was provided with no exit signs and the first floor was missing an exit sign to the east exit stair.	Provide exit signs above all exits to the exterior and all doors to the exit stairs.	Within 1 month
				
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 accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
F-18	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along all egress routes.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months

Table 3. Findings And Recommendations - Shed 1

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Rooms used for combustible storage are not separated by fire-rated construction. Specifically, rooms on the ground floor (fabric turning room, dyeing fabric store, grey fabric store, finished fabric store, accessory store).	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months





F-2	Fire Rated Construction	Areas used for combustible storage, open to the factory floor, are not separated by fire-rated construction. Specifically, areas on the ground and mezzanine floors.	<p>Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.</p> <p>Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> - Maximum height of 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² <p>Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.</p>	Within 3 months
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F-3	Fire Rated Construction	The southeast and northeast exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction. The west and northwest exit stairs are not required to be separated because they only provide access to the mezzanine.	Provide minimum 1.5-hr fire rated doors and 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.



F-4	Fire Rated Construction	The southeast and northeast exit stairs are not enclosed in fire-rated construction on all floors.	Enclose the southeast and northeast exit stairs in 2-hr fire-rated construction on all floors.	Within 3 months
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F-5	Fire Rated Construction	A flammable liquid storage area on the ground floor is not separated by fire-rated construction due to openings.	Separate the flammable liquid storage room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.	Within 3 months
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F-6	Fire Rated Construction	The boiler, generator and transformer room is not separated by fire-rated construction due to openings, a non-rated door and penetrations. The boiler, generator and transformer are not separated from each other.	Separate the boiler, generator and transformer room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations. Separate the boiler, generator and transformer from each other.	Within 3 months
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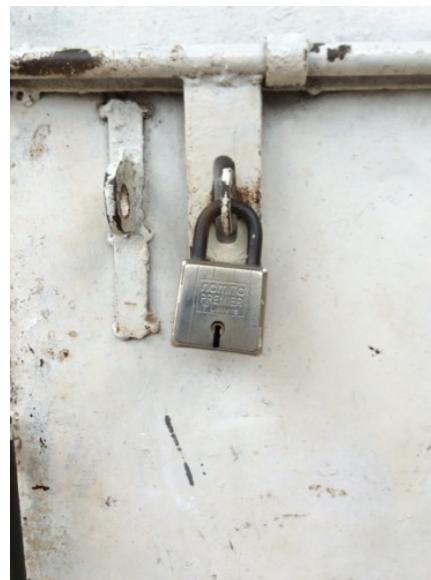
F-7	Fire Rated Construction	The gas stentor and dryer on the ground floor is not separated by fire-rated construction and open to the factory floor.	Separate the gas stentor and dryer by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations	Within 3 months
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F-8	Fire Rated Construction	The diesel fuel storage area adjacent to the utilities room was not separated by fire-rated construction.	Separate the diesel fuel storage by a minimum 2-hr fire-rated construction.	Within 3 months
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F-9	Egress	Egress doors and gates with locking features are provided at building exits, exit stairs, along egress routes and at exit discharge. All gates and 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.	Immediate
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F-10	Egress	Storage was located in the northeast exit stairs between the first and second floor.	Remove all storage from exit stairs and egress paths.	Immediate
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F-11 Egress

Collapsible gates and sliding doors are provided at building exits, exit stairs, along egress routes and at exit discharge.

Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors.

Within 1 month

If locks are required for security reasons, utilize special door locking features complying with NFPA 101.





F-12	Egress	Common path of egress travel exceeds 30 m. and travel distance exceeds 60 m. from the exit discharge of the building to the exit discharge through the east factory wall.	Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 30 m.	Within 3 months
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F-13	Egress	After exit discharge from the building, a single means of egress is provided through the east factory wall.	After exit discharge from the building, provide an additional means of egress to exit the factory premise.	Within 3 months
F-14	Egress	Handrails are not provided in the southeast exit stair on all floors.	Provide handrails on at least one side of exit stair.	Within 3 months



F-15	Egress	The southeast stairs discharge inside the building on the ground floor.	Modify stair to discharge directly outside. Alternately, provide 2-hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas). Alternately, provide sprinkler protection for discharge floor in accordance with NFPA 13.	Within 6 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	Inspection, testing, and maintenance of 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-18	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 6 months
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F-19	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 accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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F-20	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along all egress routes.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months
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Table 4. Findings And Recommendations - Shed 2

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Rooms used for combustible storage are not separated by fire- rated construction. Specifically, rooms on the ground (grey fabric store) and mezzanine (grey fabric store) floors.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months





F-2	Fire Rated Construction	Areas used for combustible storage, open to the factory floor, are not separated by fire-rated construction. Specifically, areas on the ground floor.	<p>Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.</p> <p>Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> - Maximum height of 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² <p>Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.</p>	Within 3 months
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F-3	Fire Rated Construction	The machine oil in the compressor room is not separated by fire-rated construction.	Separate the machine oil by a minimum 2-hr fire-rated construction. Seal and/or protected 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 and along egress routes. All gates and 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.	Immediate
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F-5	Egress	Collapsible gates and sliding doors are provided at building exits.	Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Within 1 month
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F-6 Egress

Common path of egress travel exceeds 30 m. and travel distance exceeds 60 m. from the exit discharge of the building to the exit discharge through the east factory wall.

Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 30 m.

Within 3 months





F-7	Egress	After exit discharge from the building, a single means of egress is provided through the east factory wall.	After exit discharge from the building, provide an additional means of egress to exit the factory premise.	Within 3 months
F-8	Egress	The two (2) ground floor exits are not remotely located from each other such that a single fire event could compromise both exits. An approximate exit separation of 80 ft. is required and the exits are only separated by approximately 57 ft.	Provide an additional remote exit. Alternately, provide sprinkler protection in accordance with NFPA 13.	Within 6 months
F-9	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-10	Fire Protection	Inspection, testing, and maintenance of 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-11	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 6 months



F-12	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 accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
F-13	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along all egress routes.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months