

FIRE SAFETY INSPECTION REPORT

IRIS DESIGN LTD.

ACCORD ID: 12378

**GAZIPUR BOGRA BYPASS ROAD, ZAJHOR, NATIONAL
UNIVERSITY, GAZIPUR-1704**

OTHER FACTORIES: NONE



ACC RD
on Fire and Building Safety in Bangladesh

November 16, 2015

SUMMARY

Iris Design Ltd. was surveyed for fire safety on 11/16/2015 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 - 2 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 01 Office Building

No.	Category	Finding	Recommendation	Remediation Timeframe
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F-1	Fire Rated Construction	Electrical panels were located in the exit stair enclosure.	Remove and re-locate all electrical panels from exit stair enclosures.	Within 3 months
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F-2	Fire Rated Construction	Exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction due to unprotected openings and penetrations in all the stairs on all floors.	Separate the exit stairs from from work areas and other building spaces on all floor levels by minimum 2-hr fire-rated construction. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings and penetrations to maintain the fire separation.	Within 3 months
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Ensure that all fire doors are self-closing and positive latching, and are provided with fire exit (panic) hardware where serving production floors or assembly occupancies. 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	Fire-rated floor and ceiling assemblies have unprotected openings and penetrations in exit stairs on all floors.	Seal all penetrations and openings in floor and ceiling assemblies to maintain the fire separation.	Within 3 months
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F-4	Fire Rated Construction	Rooms used for combustible storage are not separated by a minimum 1-hr fire-rated construction on ground floor of building 03 (warehouse building).	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 (8 ft) and maximum area of 23m² (250 ft²) OR If sprinkler protected: maximum height of 3.66m (12 ft) and maximum area of 93m² (1000 ft²) AND Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft).	Within 3 months
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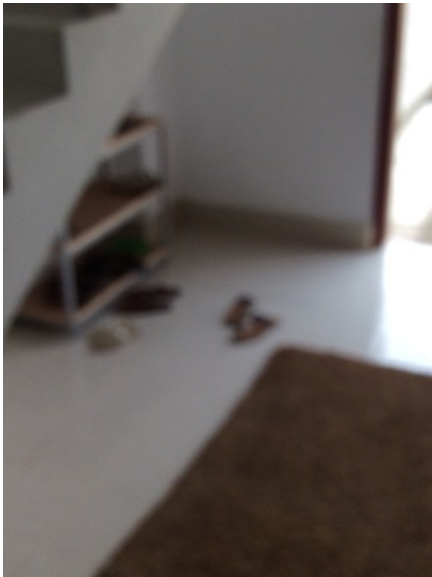




F-5	Egress	Building did not have stair designation signs, occupant load signs and emergency evacuation plans at required locations.	Provide stair designation signs, occupant load signs and emergency evacuation plans at required locations.	Immediately
F-6	Egress	Egress doors with locking features are provided at building exits, exit stairs, along egress routes and exit discharge on all floors. All gates/doors were open and unlocked during the inspection.	Remove locking features from all egress doors. If locks are required for security reasons, utilize special door locking features complying with ACCORD standard 6.8.2.	Immediately



F-7	Egress	Storage was located in the stair-01 and stair-02 exit stairs on ground floor.	Remove all storage from exit stairs.	Immediately
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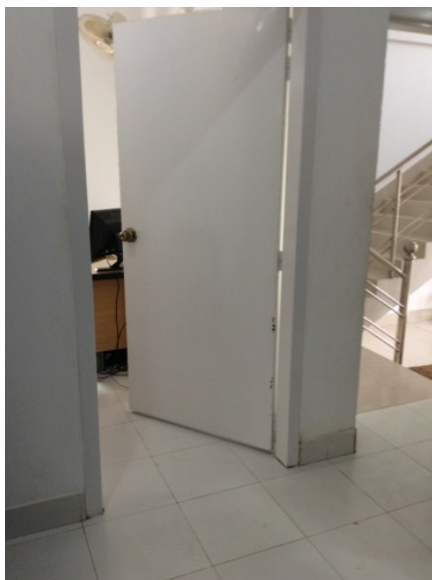
F-8	Egress	Sliding doors are provided at exit stairs, and along egress routes on 1st floor.	Replace all sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month
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F-9	Egress	Exit stairs serve more than 5 stories and do not have required re-entry provisions on all floors.	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
F-10	Egress	The day-care room does not meet ACCORD standard 3.4.2.1.1. on 1st floor.	Day-care shall be located on the ground floor with a maximum travel distance of 9 m (30 ft) or located one story above level of exit discharge with direct access to an exit enclosure. OR If the above is not possible provide a minimum 2-hr fire-rated exit corridor between the day-care room and exit stair with ACCORD approval.	Within 3 months



F-11	Egress	Egress door does not swing in the direction of egress travel on ground floor.	Modify the egress door to swing in the direction of egress travel.	Within 3 months
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F-12 Egress

Handrails are not provided on both sides of the exit stair on all floors.

Provide handrails on both sides of the exit stair. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.) .

Within 3 months





F-13	Egress	Egress door does not swing in the direction of egress travel on ground floor of building 03 (warehouse building).	Modify the egress door to swing in the direction of egress travel.	Within 3 months
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F-14	Fire Protection	Fire alarm system installation requires detailed review to confirm compliance with NFPA 72 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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F-15	Fire Protection	Fire pump installation requires detailed review to confirm compliance with NFPA 20 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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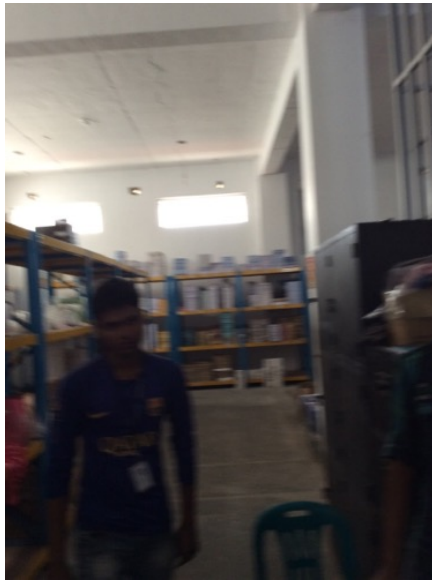
F-16	Fire Protection	The required no smoking signs are not present in the building.	Smoking is prohibited in any garment factory building or separate storage building. Signs shall be posted in Bengali and English at all building entrances. If the factory creates a designated smoking area outside the building, information of these areas will be posted on the signs.	Within 1 months
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F-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 and ACCORD standards.	Within 3 months
F-18	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 and ACCORD standards.	Within 3 months
F-19	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 and ACCORD standards.	Within 3 months
F-20	Fire Protection	Fire department connection is not provided.	Provide fire department connection in accordance with ACCORD standard 5.5.4.	Within 3 months
F-21	Fire Protection	Standpipe system is required for the building, which has an occupiable floor 10 m (33 ft) or more above grade. There were no fire hose cabinet or reel present in the building.	Install a new class III standpipe system in accordance with ACCORD standard 5.4 and NFPA 14. A class I system shall be permitted in buildings protected throughout by an approved automatic sprinkler system.	Within 6 months
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 9 months

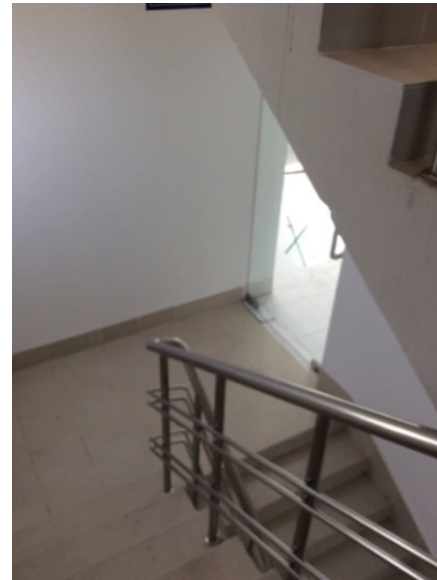
F-23	Egress Lighting	Exit signage was not provided along a path of egress and in a readily visible location on 2nd, 3rd, 4th and 5th floors.	Provide exit signs above all building exits to the exterior, all doors to the exit stairs and along all paths of travel where a change of direction is not obvious.	Within 1 month
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F-24	Egress Lighting	Exit signage was not provided along a path of egress and in a readily visible location on ground floor building 03.	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-25	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with ACCORD standards.	Inspect, test and maintain the emergency lighting system in the accordance with ACCORD standards. Keep written records on-site.	Within 3 months
F-26	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes on all 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



F-27	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes on ground floor building 03.	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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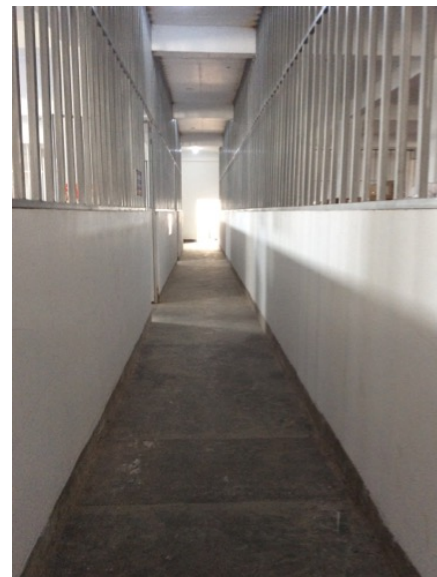


Table 2. Findings And Recommendations - Building 02 Garments Building

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Proper certification was not available for fire rated doors installed in the factory on all floors..	Submit proper certifications for installed fire doors to the ACCORD for approval. If not available, or certification is not approved, install new, properly certified fire rated doors in accordance with ACCORD direction.	Immediately





F-2	Fire Rated Construction	Electrical panels were located in the exit stair enclosure.	Remove and re-locate all electrical panels from exit stair enclosures.	Within 3 months
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F-3	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-4	Fire Rated Construction	Areas used for combustible storage open to the factory are not properly defined and not within limits on ground, 1st and 4th floors.	Provide defined storage areas and limit the storage arrangement as follows: Maximum height of 2.45m (8 ft) and maximum area of 23m² (250 ft²) OR If sprinkler protected: maximum height of 3.66m (12 ft) and maximum area of 93m² (1000 ft²) AND Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10 ft).	Within 3 months
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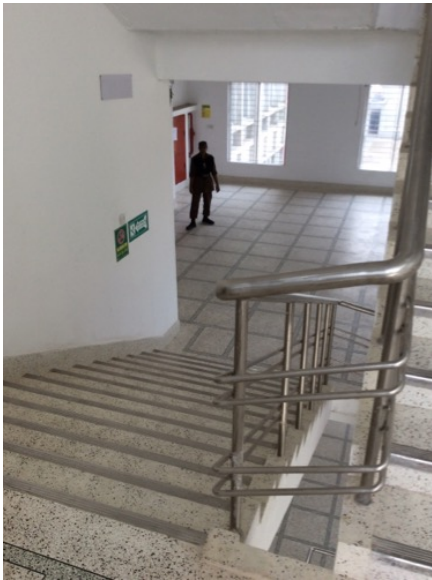
F-5	Fire Rated Construction	Rooms used for combustible storage are not separated by a minimum 1-hr fire-rated construction on 2nd, 3rd and 4th floors.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: Maximum height of 2.45m (8 ft) and maximum area of 23m² (250 ft²) OR If sprinkler protected: maximum height of 3.66m (12 ft) and maximum area of 93m² (1000 ft²) AND 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	Exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction due to unprotected openings and penetrations on all floors.	Separate the exit stairs from from work areas and other building spaces on all floor levels by sealing all unprotected openings and penetrations to maintain the fire seperation.	Within 3 months
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F-7	Fire Rated Construction	Fire-rated floor and ceiling assemblies have unprotected penetrations.	Seal all penetrations and openings in floor and ceiling assemblies to maintain the fire separation.	Within 3 months
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F-8	Egress	Building did not have stair designation signs and occupant load signs at required locations.	Provide stair designation signs and occupant load signs at required locations.	Immediately
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F-9	Egress	Egress doors with locking features are provided at building exits, exit stairs, along egress routes and exit discharge on all floors. All doors were open and unlocked during the inspection.	Remove locking features from all egress doors . If locks are required for security reasons, utilize special door locking features complying with ACCORD standard 6.8.2.	Immediately
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F-10	Egress	Storage was located in the egress path on ground floor.	Keep egress paths and stairs clear of storage.	Immediately
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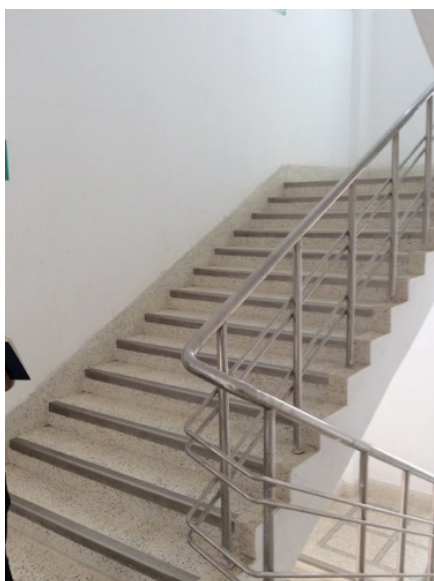
F-11	Egress	Storage was located in the exit stair on ground floor.	Remove all storage from exit stairs.	Immediately
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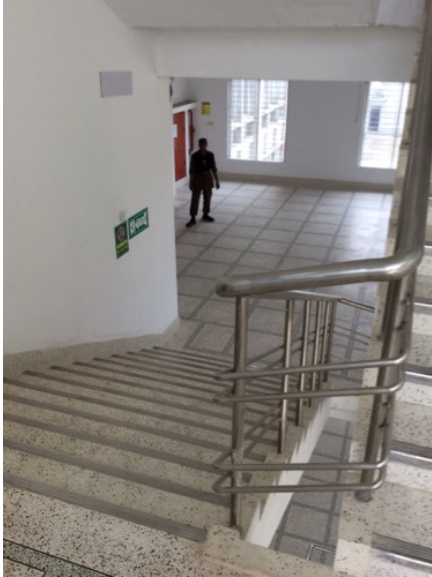


F-12	Egress	Sliding doors are provided along egress routes, and exit discharge on 1st, 2nd and 4th floors.	Replace all sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month
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F-13	Egress	The day-care room does not meet ACCORD standard 3.4.2.1.1. Specify location	Day-care shall be located on the ground floor with a maximum travel distance of 9 m (30 ft) or located one story above level of exit discharge with direct access to an exit enclosure. OR If the above is not possible provide a minimum 2-hr fire-rated exit corridor between the day-care room and exit stair with ACCORD approval.	Within 3 months
F-14	Egress	Handrails are not provided on both sides of the exit stair on all floors.	Provide handrails on both sides of the exit stair . New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.) .	Within 3 months





F-15	Fire Protection	Fire alarm system installation requires detailed review to confirm compliance with NFPA 72 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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F-16	Fire Protection	Fire pump installation requires detailed review to confirm compliance with NFPA 20 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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F-17	Fire Protection	Automatic sprinkler system installation requires detailed review to confirm compliance with NFPA 13 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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F-18	Fire Protection	Standpipe system installation requires detailed review to confirm compliance with NFPA 14 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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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 and ACCORD standards.	Within 3 months
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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 and ACCORD standards.	Within 3 months
F-21	Fire Protection	Inspection, testing and maintenance of the automatic sprinkler system is not in accordance with NFPA 25.	Inspect, test and maintain the automatic sprinkler system and keep written records on-site, in accordance with NFPA 25 and ACCORD standards.	Within 3 months
F-22	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 and ACCORD standards.	Within 3 months
F-23	Egress Lighting	Exit signage was not provided along a path of egress and in a readily visible location on all floors.	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





F-24	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with ACCORD standards.	Inspect, test and maintain the emergency lighting system in the accordance with ACCORD standards. Keep written records on-site.	Within 3 months
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