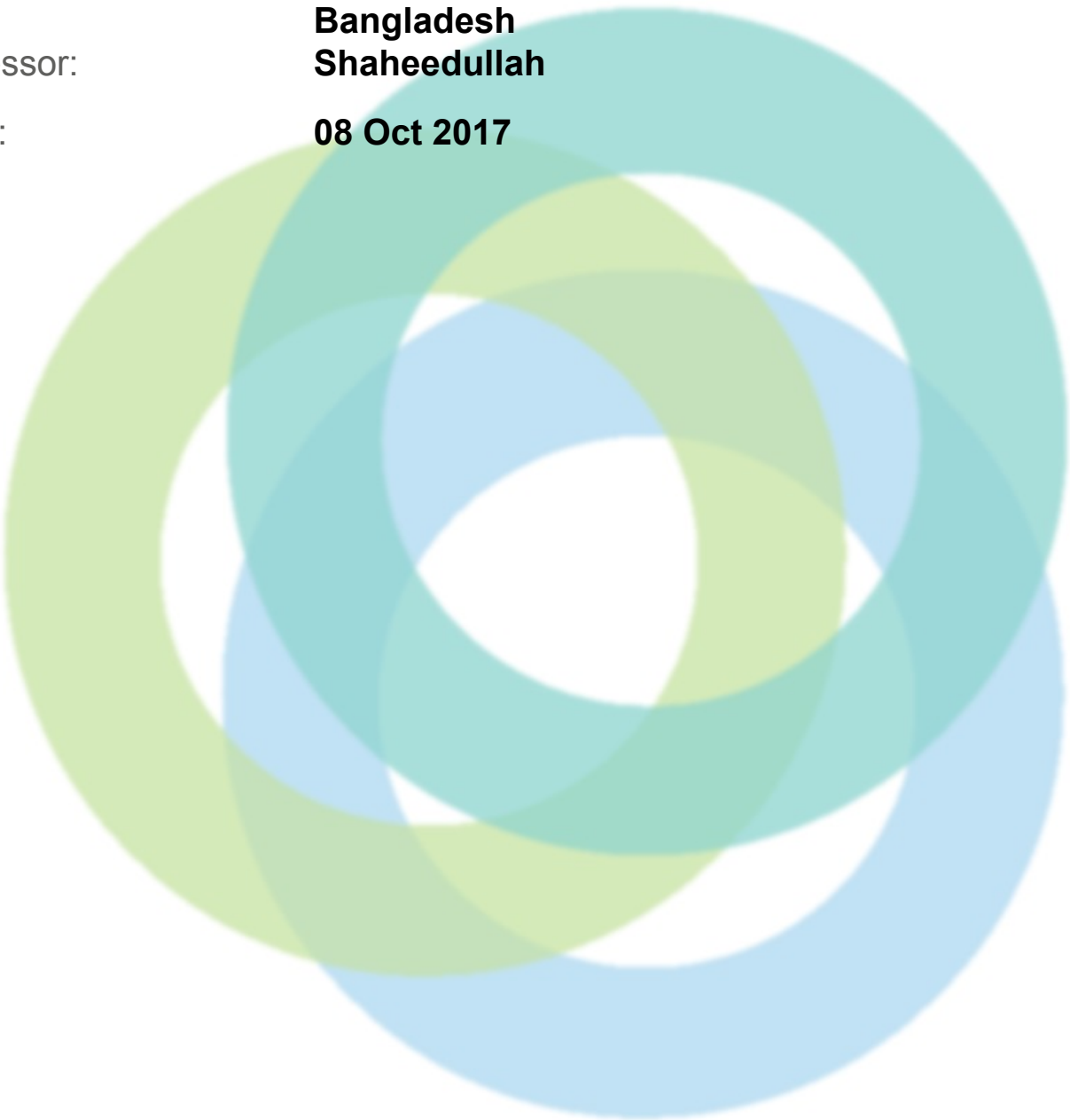




INITIAL FIRE SAFETY ASSESSMENT - EXPANSION

Factory Name: **Adury Apparels Ltd.**
Address: **Karardi, Shibpur, Narsingdi, Narsingdi Dhaka
Bangladesh**
Assessor: **Shaheedullah**
Date: **08 Oct 2017**





Introduction to the Report

The following report contains a site profile and summary of non-conformities identified during an onsite assessment commissioned by the Alliance for Bangladesh Worker Safety (Alliance) and conducted by a third-party Qualified Assessment Firm (QAF). The assessment was conducted against the Alliance for Bangladesh Worker Safety Assessment Protocols (APs) and Fire Safety and Structural Integrity Standard, which is harmonized with the factory assessment guidelines developed by Bangladesh University of Engineering and Technology (BUET) for the Bangladesh National Tripartite Plan of Action (NTPA). The goal of the Alliance process is to provide clear and practical technical requirements by which Bangladeshi Ready Made Garment (RMG) Factories producing for Alliance members may be consistently and fairly evaluated for fire, structural, and electrical safety in a non-duplicative manner. Each assessment will prompt action plans that will be used by RMG factories to systematically and sustainably improve safety conditions for garment workers. Beyond tracking and reporting on action steps taken in a transparent manner, the Alliance organization and its members will seek to further support factory improvements through technical assistance, training, implementation support for functional Worker Committees, and in some cases financial assistance and wage support for workers if factories are closed for remediation.

The contents of the report do not constitute a guarantee of compliance with the applicable laws, the Alliance Standard or the absolute or continued safety against fire, electrical and/or structural integrity issues that may lead to injury or loss of life. The report is designed to provide a non-exhaustive summary of risk issues, based on a limited sampling and duration of time onsite by the named QAF. Neither the QAF nor the Alliance can certify or guarantee the quality, outcome, or effectiveness of actions taken in response to the report.

For more information and report feedback please go to: www.bangladeshworkersafety.org.



Factory Name: **Adury Apparels Ltd.**

Address: **Karardi, Shibpur, Narsingdi, Narsingdi Dhaka Bangladesh**

Assessor: **Shaheedullah**

Date: **08 Oct 2017**



ALLIANCE
FOR BANGLADESH WORKER SAFETY

GENERAL INFORMATION

General Information

Factory Name:	Adury Apparels Ltd.
Address:	Karardi, Shibpur, Narsingdi, Narsingdi Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Narsingdi
Zip Code:	
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	10th October, 2017
Final Report Date:	22th October, 2017
Are all Action Items From Previous Assessment Completed?:	Yes
Buildings in Complex:	There are 9 buildings in the complex, 6 main and 3 ancillary buildings. Five of the main buildings and all of the ancillary buildings have been audited previously. This assessment includes Production Shed #8.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	Production Shed #8: 1-story plus mezzanine
Approximate Building Area (SF):	44,700 SF
Date of Building Construction:	2014-2015
Date of Last Building Renovation/Addition:	None
Ancillary Structures in Complex:	N/A
Approximate Ancillary Structures Area (SF):	N/A

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FOR BANGLADESH WORKER SAFETY

Number of Occupants:	589 occupants (GF: 564, Mezz: 25)
Number of Ancillary Levels (Stories):	N/A
Occupancy Type:	Ground Floor: G2 Mezzanine: F1
Construction Type:	Type-2
Height of Highest Occupied Floor Level Above Grade:	At grade.



ASSESSMENT FINDINGS

Expansion Details

Question:	Are as-built drawings available for new fire safety features of the building?
Priority Level:	High
Non-Compliance Level:	2
Description:	The as-built drawings for the new fire safety features are not available because the installation of the standpipe system and the CFDS are ongoing in the the complex.
Source of Findings:	Document Review: The as-built drawings have not been provided., Visual Assessment: The facility survey.
Suggested Plan of Action:	Prepare as-built drawings for new fire safety features (fire alarm and standpipe systems) of the buildings and submit to the Alliance for review.
Suggested Deadline Date:	30 Dec 2017
Standard:	Alliance Standard reference 8.20

Fire Protection Construction

Question:	Are openings and penetrations through rated walls and/or assemblies protected?
Priority Level:	High
Non-Compliance Level:	3
Description:	In Production Shed #8, openings through the rated walls separating the sub-storage, the finished goods storage, and the maintenance workshop from the production floor were noticed on the west side of the ground floor. Non-rated doors and window openings were also noticed, as well as a gap on the top of the rated wall up to the ceiling.
Source of Findings:	Photograph: i) Non rated opening of finished goods room. ii) Non rated opening between sub-store & production area. iii) Height of partition wall, that is not up to the ceiling. iv) The maintenance workshop., Visual Assessment: Facility Survey
Suggested Plan of Action:	Provide fire-resistive rated opening or penetration protection for rated walls and assemblies in accordance with Alliance Standard Sections 4.6 and 4.7. Consult a qualified fire protection engineer to design the required opening or penetration protection systems.
Suggested Deadline Date:	24 Dec 2017





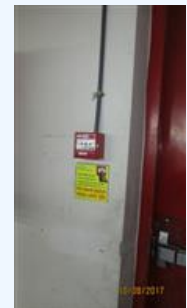
Standard:	Includes doors, windows, ducts, piping, etc. Reference Alliance Standards Part 4 Section 4.6 Opening Protectives and Section 4.7 Penetrations	
Question:	Are exit enclosures provided with fire-resistive rated construction barriers?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	In Production Shed #8, the enclosure of the North interior exit stair, which connects the mezzanine floor and the ground floor, is not provided with fire-resistive rated construction barriers on the South and East walls of the stair.	
Source of Findings:	Photograph: The exit stair without enclosure., Visual Assessment: The facility survey.	
Suggested Plan of Action:	Provide fire-resistive rated construction barriers and associated opening protection for exit enclosures in accordance with Alliance Standard Sections 4.5, 4.6, and 6.3.1.2. Consult a qualified fire protection engineer to design the required rated construction barrier and opening protection.	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Are separations between hazards provided with fire-resistive rated construction barriers.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	In Production Shed #8, the storage area for in-process storage of fabrics does not meet the requirements as an accessory occupancy in accordance with Alliance Standard Section 3.4.2.	
Source of Findings:	Photograph: i) In-process storage on the North-East corner., Visual Assessment: The facility Survey.	
Suggested Plan of Action:	Revise the area to comply with Section 3.4.2 or provide fire-resistive rated construction barriers (with associated opening protection) between hazard types in accordance with Alliance Standard Sections 3.4 and 4.5. Consult a qualified fire protection engineer to design the required rated construction barrier.	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Certificates of Occupancy for each building have been issued and are on file.	



Priority Level:	Low
Non-Compliance Level:	3
Description:	No Certificate of Occupancy was provided for review.
Source of Findings:	Document Review: No document was provided.
Suggested Plan of Action:	Apply to appropriate authority in an expeditious manner for issuance of the Certificate of Occupancy for the building according to its use.
Suggested Deadline Date:	15 Dec 2015
Standard:	Are certificates of occupancy provided for each building or ancillary structure?

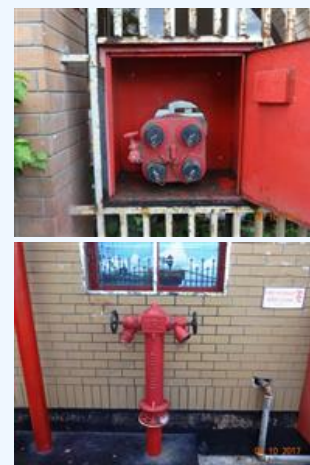
Fire Protection Systems

Question:	Are notification and initiation devices for the fire alarm system installed at required locations based on occupancy type?
Priority Level:	High
Non-Compliance Level:	3
Description:	The ceiling height of Production Shed #8 is 29 ft. 2 inches, while the false ceiling height is 10 feet 10 inches. Detectors have been found provided only on the false ceiling level. No detectors are provided above the false ceiling area where the sloped ceiling height exceeds more than 3 feet.
Source of Findings:	Photograph: i) The detectors in the false ceiling. ii) The call point. iii) The strobe., Visual Assessment: Facility Survey
Suggested Plan of Action:	Install initiating devices and notification appliances as required by the Alliance Standard and NFPA 72. This includes electrical supervision of all valves controlling fire protection systems (sprinklers, fire pumps, water supplies, etc.). Connect devices to an automatic fire alarm and detection system for the facility. All fire alarm installations or modifications shall be documented with shop drawings and submitted for review by the Alliance prior to commencement of installation.
Suggested Deadline Date:	21 Jan 2018
Standard:	Pull stations at egress points, smoke detectors in air handling equipment, visual and audible devices spaced appropriately based on occupancy type. Reference NFPA 72





Question:	Standpipe system piping is free of mechanical damage, leakage, and corrosion?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	The standpipe system piping has been found free of mechanical damage, leakage, and corrosion, but the 40 mm (1 1/2 in.) hose reels appeared old, and no listing document was available during our assessment.
Source of Findings:	Photograph: i) No Listed Tagging in the hose reel, Visual Assessment: The facility Survey
Suggested Plan of Action:	Submit listing documents for the fire hose reels and other relevant equipment of standpipe system to the Alliance for review.
Suggested Deadline Date:	24 Dec 2017
Standard:	NFPA 25 Chapter 6 Standpipe and Hose Systems
Question:	Are fire department connections provided and clearly identified for the Fire Protection Systems?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Fire department (Siamese) inlet connection has been found installed adjacent to the boundary wall of the factory complex to allow fire department pumper equipment to supplement the fire protection systems. Pillar hydrants are provided, but the fire department outlet connection to allow the fire department pumper vehicles to draw water from the underground water storage tank has not been noticed in the factory complex.
Source of Findings:	Photograph: 1.Fire department inlet connections (Siamese connection) 2. Pillar hydrant, Visual Assessment: The facility Survey.
Suggested Plan of Action:	Provide Fire Department (Siamese) connections in accordance with Alliance Standard Section 5.5.4. Connections shall match the Fire Service and Civil Defence hose thread standard.
Suggested Deadline Date:	25 Apr 2018
Standard:	Alliance Standard Part 5 Section 5.5.4 Fire Department Connections
Question:	Are portable fire extinguishers installed throughout the building at required locations and mounted at the correct height?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Portable fire extinguishers are installed on the exterior walls at a correct





	height, but they are not available within 100 ft of the production floor. The current distance was measured to be 124 feet.	
Source of Findings:	Photograph: The production floor., Visual Assessment: The facility Survey.	
Suggested Plan of Action:	Install fire extinguishers at locations and heights based on the hazard type per BNBC Part 4 and NFPA 10.	
Suggested Deadline Date:	24 Dec 2017	
Standard:	BNBC Part 4 Section 4.10 and NFPA 10	
Question:	Is the fire alarm and detection system monitored by a central station monitoring service or directly connected to the Fire Service and Civil Defense?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Installation of automatic fire alarm & detection system is in progress, but the design drawings have not yet reviewed by the Alliance.	
Source of Findings:	Visual Assessment: Facility Survey	
Suggested Plan of Action:	Submit the design documents (prepared in accordance with NFPA 72) and listings of equipment to the Alliance for review. This includes revising the drawings for the inclusion of the required devices in the concealed space above the false ceiling. After approval of the design documents, complete the system installation and arrange for direct connection of the fire alarm and detection system to a central station monitoring service or the Fire Service and Civil Defence as per Alliance Standard Section 5.7.5. Until that time, a person trained to contact the Fire Service and Civil Defence in the event of fire alarm activation shall be provided. An annunciator shall be located in a constantly attended location (such as a fire control room) to alert this person.	
Suggested Deadline Date:	21 Jan 2018	
Standard:	Alliance Standard Part 5 Section 5.7.5 Monitoring	
Question:	Is signage for the standpipe system installed at required locations and on required components?	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	Identification signs for the standpipe system have not been installed at all required locations and on required components in the factory complex, in accordance with NFPA 14 Chapter 6.	
Source of Findings:	Visual Assessment: The facility Survey.	
Suggested Plan of Action:	Install signage at required locations and on required equipment. Signage must comply with NFPA 14.	



Suggested Deadline Date:	21 Nov 2017	
Standard:	Reference NFPA 14 Chapter 6	
Means of Egress		
Question:	Exit discharge is directly to the exterior of the building, unless the requirements of 6.17.2 are met, at grade or provides direct access to grade. Exit discharge shall not reenter a building.	 
Priority Level:	High	
Non-Compliance Level:	2	
Description:	The exit discharge is directly outside the building on the North, but the egress court provided does not meet the requirements of the Section 6.17.2. The width of the court is only 8 feet 10 inches, the exterior wall on the North does not have the required 1-hour rating, and there are non-rated door and window openings.	
Source of Findings:	Photograph: i) The egress court on the North. ii) The egress court on the East., Visual Assessment: The facility Survey.	
Suggested Plan of Action:	Provide an Egress Court in accordance with Alliance Standard Section 6.17.2 for non-compliant arrangements. Consult a qualified fire protection engineer to design and/or approve the required egress court.	
Suggested Deadline Date:	25 Jan 2018	
Standard:	Alliance Standard Part 6 Section 6.17 Exit Discharge. See Section 16.7.2 and 16.7.3 for exceptions.	
Question:	Exterior exit stairs are separated from the building with the required rating. The rating of the exterior wall shall extend 3.05 m (10 ft) beyond the ends of the stair structure.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	The exterior exit stair that connects the mezzanine floor to grade level on the West side of the building is not separated from the building with the required rating. There are window openings within 5 ft. 8 inches from the ends of the stair structure.	
Source of Findings:	Photograph: i) The window openings.	
Suggested Plan of Action:	Provide a fire-resistive rated assembly between the exterior exit stairs (and 10 ft beyond the ends of the stairs) and the building to achieve the required separation. Enclose any openings (windows, etc.) with required fire rated construction within that 10 ft wall section. The rated assembly should be designed and/or approved by a qualified fire protection engineer.	
Suggested Deadline	24 Dec 2017	



Date:		
Standard:	Alliance Standard Part 6 Section 6.3.1.2. Three stories or less 1-hr rating. Four stories of more 2-hr rating	
Question:	Interior exit stairways and ramps terminate at an exit discharge except where terminating at a rated exit passageway.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	The interior exit stair that connects the mezzanine floor to the grade level terminates on the ground floor and is not provided with a rated exit passageway. The stair landing is open to the production area.	
Source of Findings:	Photograph: The interior stair, terminates on the ground floor., Visual Assessment: Facility Survey	
Suggested Plan of Action:	Exits shall discharge directly to the exterior of the building unless meeting the requirements of Alliance Standard Section 6.17.2 or 6.17.3. If requirements are not met, route exits directly to the exterior or provide an exit passageway in accordance with Alliance Standard Section 6.15 for non-compliant arrangements. Consult a qualified fire protection engineer to design and/or approve the required exit passageway.	
Suggested Deadline Date:	25 Dec 2017	
Standard:	Alliance Standard Part 6 Section 6.14 Exit Enclosures	
Question:	Stairwells are not utilized as storage spaces.	 
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Combustible materials have been found inside the interior stairwell on the ground floor.	
Source of Findings:	Photograph: i) Partex board inside the interior stairwell. ii) Carton inside the interior stairwell.	
Suggested Plan of Action:	Remove all stored materials from the stairwells.	
Suggested Deadline Date:	10 Nov 2017	
Standard:	Alliance Standard Part 13 Section 13.9 Safety Inspections	



Question:	Landings are provided on both sides of doors used along the path of egress. Doors do not swing out over stairs.	
Priority Level:	High	
Non-Compliance Level:	1	
Description:	Landings are not provided on the outside of the two exit doors on the North, and one on the West. Doors swing out over the treads.	
Source of Findings:	Photograph: The exit door without landing on the outside., Visual Assessment: The facility survey.	
Suggested Plan of Action:	Provide landings on both sides of the doors at the noted locations and at the other similar locations following the Alliance Standards.	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	Illuminated exit signs are placed at entrances to exits and along the path of egress anywhere the continuation of egress is not obvious or there is a change in the direction of the path of travel.	 
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Illuminated exit sign locations are not sufficient on the northwest side of the mezzanine floor, and at a few locations on the production floor.	
Source of Findings:	Photograph: i) Exit sign Over the exit doors ii) Directional exit sign , Visual Assessment: The Facility Survey	
Suggested Plan of Action:	Provide continuously illuminated exit signs per Alliance Standard Section 6.11. Signs shall be placed at all required exits and along egress paths, especially where there is a change in direction for the path of travel.	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Alliance Standard Part 6 Section 6.11 Exit Signs	
Question:	Illuminated exit signs are provided with battery backup or emergency power and are continuously illuminated.	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	There are some printed, non-self luminous, exit signs provided on the mezzanine floor.	
Source of Findings:	Photograph: The printed exit sign., Visual Assessment: The facility survey.	



Suggested Plan of Action:	Replace non-self luminous exits signs with compliant signage. Provide an emergency power source (battery back-up or connection to emergency power system) to provide compliant illumination of exit signs.	
Suggested Deadline Date:	25 Mar 2018	
Standard:	Alliance Standards Part 6 Section 6.11 Exit Signs and Part 10 Section 10.12 Illumination of Exit Signs and Means of Escape	
Question:	Handrails are provided on both sides of each stairway. Intermediate handrails are provided when the stair width exceeds 2.2 m (87 in.). Handrails are not mounted lower than 760 mm (30 in.) or higher than 1100 mm (44 in.).	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	Handrails are not provided on both side of the exterior exit stair on the west, connecting the mezzanine floor to grade.	 
Source of Findings:	Photograph: No handrail on the wall side.	
Suggested Plan of Action:	Provide handrails on both sides of each stairway. Mount new handrail at a height consistent with existing height (between 30 in. and 44 in). The spacing between vertical members will not exceed 200 mm (8 inch).	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards	
Question:	Stair designation signs are provided at each floor entrance from the stair to the floor in English and Bengali. Signs indicate the name of the stair and the floor level. Signs are posted adjacent to the door.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	Stair designation signs are not provided at the mezzanine entrance from the stairs.	
Source of Findings:	Photograph: i) The interior exit stair. ii) The exterior exit stair., Visual Assessment: Facility Survey	
Suggested Plan of Action:	Install signage adjacent to each stair door indicating the stair name and the floor level in both English and Bengali.	
Suggested Deadline Date:	25 Nov 2017	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs	
Fire Safety Programs		



Question:	Are the required number of people trained and certified in fire fighting, first aid, and rescue training by the appropriate authority.
Priority Level:	High
Non-Compliance Level:	2
Description:	In a total only 520 people out of 4,200 have been trained and certified by the National Fire Service & Civil Defense (FS&CD), where the achievement is only 12.38% against target of a minimum 18% for the entire factory complex of Adury Apparels Ltd as per documents provided.
Source of Findings:	Document Review: The documents provided have been reviewed.
Suggested Plan of Action:	Provide training and certification for the required number of people (18% of total workers) in fire fighting, first aid, and rescue training by an appropriate authority in accordance with the Alliance Safety Training Curriculum.
Suggested Deadline Date:	25 Mar 2018
Standard:	Alliance Standard Part 13 Human Element Programs
Question:	An emergency evacuation plan has been developed and communicated to all employees.
Priority Level:	Medium
Non-Compliance Level:	1
Description:	The evacuation plan provided for review does not appear to include the duties and responsibilities of various people/groups towards interfacing between groups and fire brigade, headcount and identification of trapped victims etc. and all other components required by the Alliance Standards. The provisions to assist the physically disabled persons are also not included in the evacuation plan .
Source of Findings:	Document Review: The document provided has been reviewed.
Suggested Plan of Action:	Develop an emergency evacuation plan in accordance with the Alliance Standard and communicate the plan to all employees.
Suggested Deadline Date:	24 Dec 2017
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director
Question:	Emergency egress maps are posted at the entrance to each exit stair or main point of egress.
Priority Level:	Medium
Non-Compliance Level:	1
Description:	No emergency egress maps are posted at the entrance to each exit stair or at the main point of egress at the exit doors.

Factory Name: **Adury Apparels Ltd.**

Address: **Karardi, Shibpur, Narsingdi, Narsingdi Dhaka Bangladesh**

Assessor: **Shaheedullah**

Date: **08 Oct 2017**



ALLIANCE
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Source of Findings:	Visual Assessment: The Facility Survey	
Suggested Plan of Action:	Create and post emergency evacuation maps at the entrance to each stair or main point of egress.	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Alliance Standards Part 13 Section 13.4 Evacuation Plan	
Question:	Fire Department pre-planning has been completed.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	A layout plan of the entire complex, reflecting the fire protection system, including a layout of the standpipe system, the source of water (reservoir tank), pillar hydrants, and the fire department (Siamese) connections has been found prepared and displayed, but that has not yet been submitted to the local FS&CD.	
Source of Findings:	Document Review: The document provided has been reviewed., Visual Assessment: The facility survey.	
Suggested Plan of Action:	Complete Fire Department pre-planning activities with the local Fire Service and Civil Defence in accordance with Alliance Standard Section 13.1.1(2).	
Suggested Deadline Date:	24 Dec 2017	
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	