

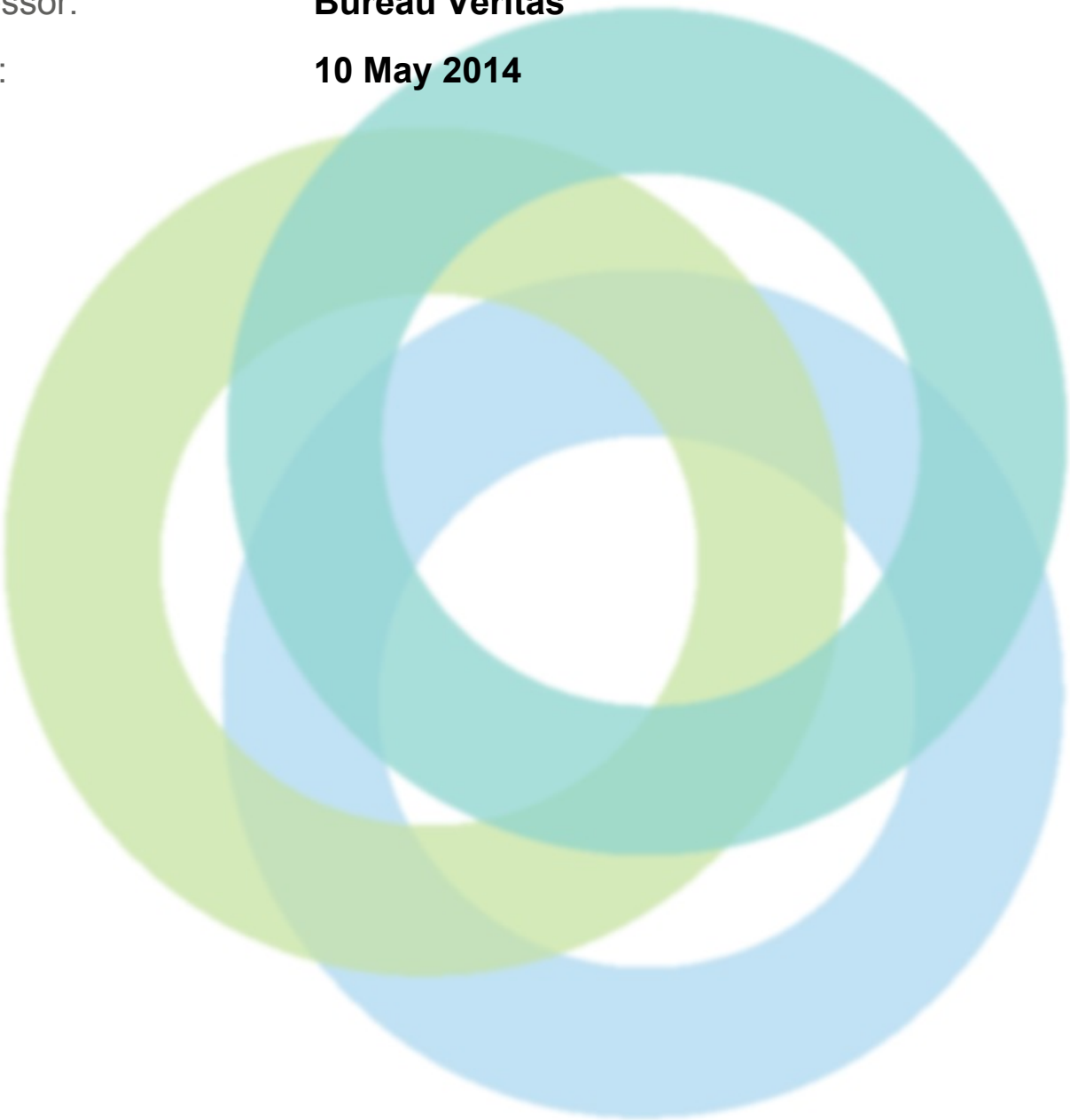
INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **DENIM PLUS (BD) LTD**

Address: **Plot 3-8, Sector 7, CEPZ, Chittagong Chittagong
Chittagong Bangladesh**

Assessor: **Bureau Veritas**

Date: **10 May 2014**





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.





GENERAL INFORMATION

General Information	
Factory Name:	DENIM PLUS (BD) LTD
Address:	Plot 3-8, Sector 7, CEPZ, Chittagong Chittagong Chittagong Bangladesh
Country:	Bangladesh
Province:	Chittagong
City:	Chittagong
Zip Code:	4223
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	05-17-2014
Final Report Date:	06-16-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	There are 14 buildings in the premises out of which two are main production buildings & 12 are ancillary buildings. The buildings are named as: 1) Four story RCC main production building, 2) Single story Washing prefab production shed (with one mezzanine floor), 3) Single story RCC Gate house, 4) Single story RCC Driver rest house, 5) Single story prefab wastage store shed, 6) Single story RCC Boiler building-01, 7) Single story RCC Boiler building-02, 8) Single story RCC Compressor building, 9) Single story CI Gas meter shed, 10) Single story CI Hydrant shed, 11) Single story CI Dining & Kitchen shed, 12) Single story RCC Sub-station building, 13) Single story RCC Toilet building, 14) Single story masonry CI Mechanical workshop.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	Information provided below as per following format: Highest occupied floor level [Height up to roof], Occupied level. 1) Main production building: 10.97 m or 36 ft [14.17 m or 46.5 ft], 4, 2) Washing shed: 1.37 m or 4.5 ft [8.37 m or 27.46 ft], 1, 3) Gate house: 0.18 m or 0.6 ft [3.07 m or 10.08 ft], 1, 4) Driver rest house: 0.18 m or 0.6 ft [2.46 m or 8.08 ft], 1, 5) Wastage store shed: 0.15 m or 0.5 ft [4.57 m or 15 ft], 1, 6) Boiler building-01: 0.15 m or 0.5 ft [3.40 m or 11.17 ft], 1, 7) Boiler building-02: 1.23 m or 4.06 ft [5.79 m or 19 ft], 1, 8) Compressor building: 0.23 m or 0.77 ft [3.58 m or 11.75 ft], 1, 9) Gas meter shed: 0.15 m or 0.5 ft [1.83 m or 6 ft], 1, 10) Hydrant shed: 0.15 m or 0.5 ft [3.66 m or 12 ft], 1, 11) Dining & Kitchen shed: 0.15 m or 0.5 ft [6.09 m or 20 ft], 1, 12) Sub-station building: 0.78 m or 2.53 ft [3.81 m or 12.5 ft], 1, 13) Toilet building: 0.15 m or 0.5 ft [2.44 m or 8 ft], 1, 14) Mechanical workshop: 0.15 m or 0.5 ft [4.42 m or 14.6 ft], 1.
Approximate Building Area (SF):	Total Area of all buildings in the factory premises: 101348 sft. Building wise breakdown as follows: 1) Four story RCC main production building: 55760 sft (Ground floor: 13940 sft, 1st floor: 13940 sft, 2nd floor: 13940 sft, 3rd floor: 13940 sft), 2) Single story Washing prefab production shed (with one mezzanine floor): 35192



	sft, 3) Single story RCC Gate house: 111 sft, 4) Single story RCC Driver rest house: 224 sft, 5) Single story prefab wastage store shed: 855 sft, 6) Single story RCC Boiler building-01: 858 sft, 7) Single story RCC Boiler building-02: 988 sft, 8) Single story RCC Compressor building: 344 sft, 9) Single story CI Gas meter shed: 60 sft, 10) Single story CI Hydrant shed: 165 sft, 11) Single story CI Dining & Kitchen shed: 5011 sft, 12) Single story RCC Sub-station building: 400 sft, 13) Single story RCC Toilet building: 480 sft, 14) Single story masonry CI Mechanical workshop: 900 sft.
Date of Building Construction:	Factory personnel informed the date of construction as follows: Construction started in 1997 and finished in 1998, for all buildings.
Date of Last Building Renovation/Addition:	Construction of ETP building is ongoing.
Ancillary Structures in Complex:	1) Single story RCC Gate house, 2) Single story RCC Driver rest house, 3) Single story prefab wastage store shed, 4) Single story RCC Boiler building-01, 5) Single story RCC Boiler building-02, 6) Single story RCC Compressor building, 7) Single story CI Gas meter shed, 8) Single story CI Hydrant shed, 9) Single story CI Dining & Kitchen shed, 10) Single story RCC Sub-station building, 11) Single story RCC Toilet building, 12) Single story masonry CI Mechanical workshop.
Approximate Ancillary Structures Area (SF):	1) Single story RCC Gate house: 111 sft, 2) Single story RCC Driver rest house: 224 sft, 3) Single story prefab wastage store shed: 855 sft, 4) Single story RCC Boiler building-01: 858 sft, 5) Single story RCC Boiler building-02: 988 sft, 6) Single story RCC Compressor building: 344 sft, 7) Single story CI Gas meter shed: 60 sft, 8) Single story CI Hydrant shed: 165 sft, 9) Single story CI Dining & Kitchen shed: 5011 sft, 10) Single story RCC Sub-station building: 400 sft, 11) Single story RCC Toilet building: 480 sft, 12) Single story masonry CI Mechanical workshop: 900 sft.
Number of Occupants:	Total number of occupants: 1212. 1) Four story RCC main production building: 687 (Ground floor: 11, 1st floor: 298, 2nd floor: 295, 3rd floor: 83), 2) Single story Washing prefab production shed (with one mezzanine floor): 479, 3) Single story RCC Gate house: 5, 4) Single story RCC Compressor building: 4, 5) Single story prefab wastage store shed: 1, 6) Single story RCC Boiler building-01: 1, 7) Single story RCC Boiler building-01: 1, 8) Single story RCC Compressor building: 1, 9) Single story CI Gas meter shed: 3, 10) Single story CI Hydrant shed: 1, 11) Single story CI Dining & Kitchen shed: 13, 12) Single story RCC Sub-station building: 1, 13) Single story RCC Toilet building: 1, 14) Single story masonry CI Mechanical workshop: 14.
Number of Ancillary Levels (Stories):	1. Gate House:Building Height (Highest occupied floor level): 0.18 m or 0.6 ft [Height from ground level to roof: 3.07 m or 10.08 ft],Occupied levels: 1;2. Driver waiting building:Building Height (Highest occupied floor level): 0.18 m or 0.6 ft [Height from ground level to roof: 2.46 m or 8.08 ft],Occupied levels:1;3. Wastage store PEB shed:Building Height (Highest occupied floor level): 0.15 m or 0.5 ft [Height from ground level to roof: 4.57 m or 15 ft],Occupied levels:1;4. Boiler building-01:Building Height (Highest occupied floor level): 0.15 m or 0.5 ft [Height from ground level to roof: 3.40 m or 11.17 ft],Occupied levels: 1;5. Boiler building-02:Building Height (Highest occupied floor level): 1.23 m or 4.06 ft [Height from ground level to roof: 5.79 m or 19 ft],Occupied levels: 1;



ASSESSMENT FINDINGS

Fire Protection Construction

Question:	Are openings and penetrations through rated walls and/or assemblies protected?
Priority Level:	High
Non-Compliance Level:	2
Description:	Doors & windows of the fabric store on the ground floor, and accessories store on the ground floor of the main building are not protected. Prefabricated washing shed doors & windows on rated walls of accessories store, finished goods store, finished goods store in mezzanine and washing sections, chemical store, and generator room are not protected. Doors and windows of the sub-station, boiler room 1 and boiler room 2, and the wastage store room are not protected.
Source of Findings:	Visual Assessment: An unprotected door of the accessories store and an unprotected door of the chemical store.
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 protectives or penetration systems.
Suggested Deadline Date:	03 Sep 2014
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:	There are 2 staircases from the ground floor to the 3rd floor in the 4 story main building. Fire rated doors (not certified) were installed at some exit points to floors from one staircase, but exit doors in another staircase were not fire rated. All the doors of exit enclosure need to be 1.5 hour rated as per clauses 4.5 and 4.6.
Source of Findings:	Visual Assessment: Exit doors in another staircase were not fire rated.
Suggested Plan of Action:	Provide 2 hr fire-resistive rated construction barriers at exit enclosures. Fit side-swinging, self-closing, non-lockable fire doors of 1.5 hr rating, that open in the direction of egress, in all stairwell enclosures. Consult a qualified fire protection engineer to design the required rated construction barriers.
Suggested Deadline	03 Sep 2014





Date:		
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Are shafts provided with the minimum fire-resistance rating?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	The elevator (cargo lift) in the main building is open to the production floor, and the door of the elevator shaft is not fire rated as required.	
Source of Findings:	Photograph: Photograph shows the cargo lift in the main building.	
Suggested Plan of Action:	Provide a fire door of the required rating as the door of the elevator/cargo lift. Provide fire-resistive rated construction barriers for shafts in accordance with Alliance Standard Section 4.5.7. Consult a qualified fire protection engineer to design the required rated construction barrier.	
Suggested Deadline Date:	03 Sep 2014	
Standard:	Reference Alliance Standards Part 4 Section 4.5.7.1 through 4.5.7.3	
Question:	Are separations between hazards provided with fire-resistive rated construction barriers.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The fabric store & the office on the ground floor, the accessories store & the office on the ground floor, and the finishing section and the office on the 1st floor of the main building are not separated by fire-resistive rated construction barriers. The washing shed, the accessories store & the repair section, the finished good store & the finishing section office, the finished goods store on the mezzanine level & the washing section, and the chemical store & the finished goods store on the mezzanine level are not separated by fire-resistive rated construction barriers. The wastage store room and the chemical stacking area in ETP are not separated by fire-resistive rated construction barriers.	
Source of Findings:	Visual Assessment: Photos are provided for (1) The accessories store & the repair section are not separated in the washing shed, and (2) The finished goods store & the finishing section/office in the washing shed are not separated with fire-resistive rated construction barriers.	
Suggested Plan of Action:	Provide fire-resistive rated construction barriers 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:	26 Nov 2014	
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:	1
Description:	No Certificates of Occupancy are available for any building on the factory premises.
Source of Findings:	Document Review: No Certificates of Occupancy are available for any building on the factory premises among the documents shown by factory personnel.
Suggested Plan of Action:	Apply to BEPZA for issuance of occupancy certificate and pursue the matter to expedite the process.
Suggested Deadline Date:	23 Jul 2014
Standard:	Are certificates of occupancy provided for each building or ancillary structure?
Question:	Occupancy Type
Priority Level:	
Non-Compliance Level:	
Description:	1) Four story RCC main production building: [Ground floor: H2 (Storage), F1 (Office), 1st floor: G2 (Sewing), F1 (Office), 2nd floor: G2 (Cutting), F1 (office), 3rd floor: G2 (Cutting), F1 (office)], 2) Single story Washing prefab production shed (with one mezzanine floor): G2 (Washing, Laboratory), H2 (Storage), J2 (Chemical store for washing plant), F1 (Office), B2 (Childcare), D1 (Doctor room), K1 (Generator), 3) Single story RCC Gate house: F1 (Security station), 4) Single story RCC Driver rest house: F1 (Driver waiting), 5) Single story prefab wastage store shed: H2 (Storage), 6) Single story RCC Boiler building-01: K1 (Boiler), 7) Single story RCC Boiler building-02: K1 (Boiler), 8) Single story RCC Compressor building: K1 (Compressor), 9) Single story CI Gas meter shed: K1 (Gas meter room), 10) Single story CI Hydrant shed: K1 (Pump room), 11) Single story CI Dining & Kitchen shed: E3 (Dining), E4 (Prayer room), J1 (Kitchen), 12) Single story RCC Sub-station building: K1 (Transformer), 13) Single story RCC Toilet building: K1 (Utility), 14) Single story masonry CI Mechanical workshop: K1 (Workshop).
Source of Findings:	Visual Assessment: .
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Provide Occupancy Type for each building and structure. Reference Alliance Standards Part 3 Use and Occupancy
Question:	Construction Type
Priority Level:	



Non-Compliance Level:	
Description:	1) Four story RCC main production building: Type 1, 2) Single story Washing prefab production shed (with one mezzanine floor): Non-rated, 3) Single story RCC Gate house: Type 1, 4) Single story RCC Driver rest house: Type 1, 5) Single story prefab wastage store shed: Non-rated, 6) Single story RCC Boiler building-01: Type 1, 7) Single story RCC Boiler building-02: Type 1, 8) Single story RCC Compressor building: Type 1, 9) Single story CI Gas meter shed: Non-rated, 10) Single story CI Hydrant shed: Non-rated, 11) Single story CI Dining & Kitchen shed: Non-rated, 12) Single story RCC Sub-station building: Type 1, 13) Single story RCC Toilet building: Type 1, 14) Single story masonry CI Mechanical workshop: Non-rated.
Source of Findings:	Visual Assessment: .
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Provide construction type for each building and ancillary structure. Reference Alliance Standards Table 3.3.1
Question:	Height of Highest Occupied Floor Level Above Grade
Priority Level:	
Non-Compliance Level:	
Description:	1) Four story RCC main production building: 10.97 m or 36 ft, 2) Single story Washing prefab production shed (with one mezzanine floor): 1.37 m or 4.5 ft, 3) Single story RCC Gate house: 0.18 m or 0.6 ft, 4) Single story RCC Driver rest house: 0.18 m or 0.6 ft, 5) Single story prefab wastage store shed: 0.15 m or 0.50 ft, 6) Single story RCC Boiler building-01: 0.15 m or 0.50 ft, 7) Single story RCC Boiler building-02: 1.23 m or 4.06 ft, 8) Single story RCC Compressor building: 0.23 m or 0.77 ft, 9) Single story CI Gas meter shed: 0.15 m or 0.5 ft, 10) Single story CI Hydrant shed: 0.15 m or 0.5 ft, 11) Single story CI Dining & Kitchen shed: 0.15 m or 0.5 ft, 12) Single story RCC Sub-station building: 0.78 m or 2.53 ft, 13) Single story RCC Toilet building: 0.15 m or 0.50 ft, 14) Single story masonry CI Mechanical workshop: 0.15 m or 0.50 ft.
Source of Findings:	Visual Assessment: .
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Provide maximum height of highest occupied floor level above grade for each type of building and ancillary structure.
Fire Protection Systems	



Question:	Does the building have a Standpipe System?
Priority Level:	High
Non-Compliance Level:	2
Description:	The height of the highest occupied floor of the main building is 10.97 m, or 36 ft, above grade. Standpipe systems need to be installed throughout the building where the highest occupied floor is more than 10 m (33 ft) above grade. There is a standpipe system in the main building and the washing shed, but there is no hydraulic design for the system. Two 65 mm hose connections with hose stations are installed at one staircase on each floor level. There is no hose connection at another stairwell and inside the floor. A 40 mm hose connection is installed in the washing shed. Water capacity is not sufficient, but hose pressure was sufficient as per the standard.
Source of Findings:	Photograph: Photo 1: A Standpipe system in the building Photo 2: 65 mm hose connection with cabinet installed at one stair. Photo 3: No class I hose connection at another stairwell.
Suggested Plan of Action:	Install a standpipe system at required locations designed by a qualified fire protection engineer. The system is to be compliant with the requirements of NFPA 14. The hydraulic calculations should be reviewed by the Alliance, and the review should be completed prior to the start of work. All standpipe system installations shall be submitted for review by the Alliance for review prior to commencement of the installation according to 5.4.3.2. System design should also account for the two additional stories currently under construction. Testing of the installation shall be conducted in accordance with NFPA 14 acceptance testing requirements. Documentation of all testing shall be submitted for review by the Alliance. Final inspection and testing of the installation shall be witnessed by the Alliance as per clause 5.4.3.3.
Suggested Deadline Date:	03 Sep 2014
Standard:	Does the building have a standpipe system installed where required. Alliance Standard Part 5 Section 5.4.2
Question:	Does the building have a fire pump?
Priority Level:	High
Non-Compliance Level:	2
Description:	A fire pump is available; however it does not comply with the requirements of Alliance Standards and NFPA 20. Hydraulic calculation for the installed standpipe and sprinkler systems are not also available. Therefore, the required capacity of the fire pump is not known.
Source of Findings:	Visual Assessment: Fire pump and hose pressure are provided.
Suggested Plan of Action:	Install a dedicated fire pump for the facility in accordance with NFPA 20 to supply the demands of the connected fire protection systems along with a stored source of water sufficient to meet the demands in accordance with NFPA 22. Fire pump installation is to be tested for final acceptance in presence of Alliance and a final inspection of the installation shall be conducted by the Alliance prior to final acceptance of the installation by the





	Alliance as per clause 5.5.5. Acceptance testing of the installation shall be in accordance with NFPA 20, 22, and 25 testing requirements. Documentation of all testing shall be submitted to the Alliance for review prior to final acceptance by the Alliance.	
Suggested Deadline Date:	28 Aug 2014	
Standard:	Alliance Standard Part 5 Fire Protection Systems	
Question:	Standpipe system piping is free of mechanical damage, leakage, and corrosion?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No proper standpipe system is installed in the building. Mechanical damage, leakage, or corrosion was not found in the installed Class-II standpipe system.	
Source of Findings:	Visual Assessment: Mechanical damage, leakage, or corrosion was not found in the class-II standpipe system.	
Suggested Plan of Action:	Install a standpipe system at required locations designed by a qualified fire protection engineer. The system should comply with the requirements of NFPA 14.	
Suggested Deadline Date:	03 Sep 2014	
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 connections are provided as per clause 5.5.4. Connections are clearly identifiable for the fire protection system. However, fire department outlet connections are not provided on the premises.	
Source of Findings:	Visual Assessment: Fire department outlet connections are not provided on the premises.	
Suggested Plan of Action:	According to Alliance Standard, Part-5, Section-5.5.4, fire department (Siamese) inlet connections shall be provided to allow fire department pumper equipment to supplement the fire protection systems. Fire department outlet connections shall be provided to allow fire department pumper vehicles to draw water from ground-level or underground water storage tanks. Are there water storage tanks available? This may not be applicable unless a means for water storage is required or available. Connections shall match the Fire Service and Civil Defense hose thread standard.	
Suggested Deadline	26 Nov 2014	





Date:		
Standard:	Alliance Standard Part 5 Section 5.5.4 Fire Department Connections	
Question:	Fire extinguishers are inspected, tested, and maintained as required.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Fire extinguishers are inspected, tested, and maintained every month but not in accordance with NFPA 10, Chapter 7.	
Source of Findings:	Document Review: Documentation regarding inspection, maintenance, and testing procedures for fire extinguishers was found in the documents provided by the factory personnel, but not in accordance with NFPA 10.	
Suggested Plan of Action:	Establish an inspection, testing, and maintenance program for all fire extinguishers and prepare proper documentation. Program must comply with NFPA 10.	
Suggested Deadline Date:	26 Nov 2014	
Standard:	NFPA 10 Chapter 7	
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:	An automatic fire alarm and detection system is available in the factory. However, currently there is no monitoring company in Bangladesh. Fire service and civil defense are also not capable of monitoring factory fire alarm and detection systems.	
Source of Findings:	Visual Assessment: Centralized detection system panel on the ground floor.	
Suggested Plan of Action:	Arrange for direct connection of the fire alarm system to a central monitoring station or Fire Service and Civil Defense. Until the time that monitoring can be set up, arrange a monitoring system using the factory's own central detection system and personnel. A person shall be assigned to contact the fire department in the event of fire alarm activation. An annunciator shall be located in a constantly attended location (such as a fire control room) to alert this person.	
Suggested Deadline Date:	09 Jul 2014	
Standard:	Alliance Standard Part 5 Section 5.7.5 Monitoring	
Question:	Are inspection, maintenance, and testing procedures of the standpipe and hose system documented and up to date? Including inspection and testing of hoses if provided.	



Priority Level:	Low
Non-Compliance Level:	2
Description:	An NAPA-compliant standpipe system is not installed in the building. Inspection, maintenance, and testing procedures of the installed class II standpipe and hose system are not documented and up to date.
Source of Findings:	Document Review: No documentation regarding inspection, maintenance and testing procedures of the standpipe and hose system was found among the documents shown by factory personnel.
Suggested Plan of Action:	Install a class III standpipe system at required locations designed by a qualified fire protection engineer. The system should comply with the requirements of NFPA 14. Then establish an inspection, maintenance, and testing program for the standpipe and hose system. The program must comply with the requirements of NFPA 25 Chapter 6, Table 6.1.1.2.
Suggested Deadline Date:	26 Nov 2014
Standard:	Reference NFPA 25 Chapter 6 Standpipe and Hose Systems Table 6.1.1.2
Question:	Is signage for the standpipe system installed at required locations and on required components?
Priority Level:	Low
Non-Compliance Level:	2
Description:	An NFPA-compliant standpipe system is not installed in the building. Signage for the available standpipe system is not installed.
Source of Findings:	Visual Assessment: No signage was found for the standpipe system, as per NFPA 14.
Suggested Plan of Action:	Install a compliant standpipe system at required locations designed by a qualified fire protection engineer. The system should comply with the requirements of NFPA 14. Install required identification signs at the noted locations. Signage must comply with NFPA 14 Chapter 6.
Suggested Deadline Date:	15 Sep 2014
Standard:	Reference NFPA 14 Chapter 6
Question:	Are inspection, maintenance, and testing procedures of the fire pump documented and up to date?
Priority Level:	Low
Non-Compliance Level:	2
Description:	The installed fire pump does not comply with the requirements of Alliance Standards and NFPA 20. Inspection, maintenance, and testing procedures of the installed pump are not documented and up to date.





Source of Findings:	Document Review: Documentation regarding inspection, maintenance, and testing procedure of the fire pump was not found in the documents shown by factory personnel.
Suggested Plan of Action:	Install a pump dedicated for fire fighting or fire protection following the requirements of NFPA 20, as mentioned in Alliance Standard Section 5.5.1. Then establish an inspection, maintenance, and testing program for the fire pump. The program must comply with NFPA 25.
Suggested Deadline Date:	26 Nov 2014
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps

Means of Egress

Question:	Doors along the path of egress have a minimum width of 0.8 m (32 in) and have required ratings.
Priority Level:	High
Non-Compliance Level:	3
Description:	Door widths are more than 0.8m, but there are some doors along the path of egress (i.e. doors leading to a staircase) on all floors that do not have a rating of 1.5 hour as required in accordance with sections 6.3.1.2.2 and 4.6.
Source of Findings:	Visual Assessment: MS sliding doors do not have a rating of 1.5 hour.
Suggested Plan of Action:	Provide 1.5 hr fire protective opening assemblies in 2 hr rated exit enclosures. Exits connecting three or fewer stories shall be enclosed with a minimum 1-hr fire-resistance rating. Exits connecting four or more stories shall be enclosed with a minimum 2 hr fire-resistance rating.
Suggested Deadline Date:	03 Sep 2014
Standard:	Alliance Standard Part 6 Section 6.5.6 Minimum Widths. Increased occupant loads will require a door width greater than 0.8 m.
Question:	Doors are not locked in the direction of egress under any conditions. All hasps, locks, slide bolts, and other locking devices have been removed where required.
Priority Level:	High
Non-Compliance Level:	2
Description:	There are MS sliding doors and a glass swing door in some exits of the west side stairway with locking arrangements at each egress location.
Source of Findings:	Visual Assessment: MS sliding doors with a locking arrangements are at egress locations.
Suggested Plan of Action:	Remove all hasps, locks, slide bolts, and other locking devices at the noted locations. Doors may be locked where the latch and lock are disengaged with





	one motion where the occupant load does not exceed 49 persons. Provide 1.5 hr fire protective opening assemblies in 2 hr rated exit enclosure.	
Suggested Deadline Date:	25 Jul 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	All doors in a means of egress are of the side-hinged swinging type.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	There are 2 exit doors on each floor, and only 1 door is a side-hinged door. The other door is an MS sliding door.	
Source of Findings:	Visual Assessment: MS sliding doors at one exit were found.	
Suggested Plan of Action:	Replace all collapsible doors, sliding doors, roll-down gates, and shutters in means of egresses with side-hinged swinging type doors of a proper width and rating.	
Suggested Deadline Date:	03 Sep 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	Aisles are provided with the minimum unobstructed clear width of 0.9 m (36 in) based on occupant loads.	
Priority Level:	High	
Non-Compliance Level:	1	
Description:	Minimum widths of aisles in the accessories store on the ground floor of the main building is 0.71m. Minimum width of aisles in the sample section of the 3rd floor of the main building is 0.71m. Minimum width of aisles in the accessories store in the washing shed is 0.58m. Several aisles do not satisfy width requirements in the washing shed.	
Source of Findings:	Visual Assessment: Measurements of aisle widths were taken.	
Suggested Plan of Action:	Provide proper aisles marking (clear width minimum 36 in.) and keep aisles free of storage. The path of egress travel along a means of egress shall not be interrupted by any obstruction. The capacity of the means of egress shall not be reduced along the path of travel.	
Suggested Deadline Date:	03 Sep 2014	
Standard:	Higher occupancy loads will require a greater width to accommodate the increased load. Alliance Standard Part 6 Section 6.5 Egress Width	



Question:	Means of egress are free from impediments, obstructions, and stored materials.
Priority Level:	High
Non-Compliance Level:	1
Description:	Aisles are temporarily blocked by the seating arrangements of workers in the repair section and the material stacking section in the washing area of the washing shed. Other means of egress are free from impediments, obstructions, and stored materials.
Source of Findings:	Photograph: Temporary blockade of aisle in repair section is found.
Suggested Plan of Action:	Maintain means of egress continuously free and clear of all obstructions or impediments to ensure full, instant use in the case of fire or other emergency.
Suggested Deadline Date:	11 Jun 2014
Standard:	Alliance Standard Part 6 Section 6.3.8 Impediments to means of egress and Section 6.3.9 Reliability
Question:	Occupant loads are posted for every assembly and production floor in a conspicuous space near the main point of egress.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Occupant loads are not posted in a conspicuous space near the main exits or exit access doorways.
Source of Findings:	Visual Assessment: Occupant loads were not found to be posted on any assembly or production floor.
Suggested Plan of Action:	Post the occupant load for all assembly and production floor areas in a conspicuous space near the main exit or exit access doorway for the space in accordance with Alliance Standard Section 6.4.4.
Suggested Deadline Date:	09 Jul 2014
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load
Question:	Ramps do not have a running slope greater than 1 in 8 (12.5 percent) and have handrails on both sides of the ramp.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	The slope of the ramp on the west side of the washing shed near the chemical storage is 1 in 2.4 (i.e. greater than 1 in 8), and a handrail is only provided on one side. The slope of the ramp in middle of the washing shed near the laboratory is 1 in 4.33 (i.e. greater than 1 in 8), and no handrail is provided on





	either side of the ramp.	
Source of Findings:	Photograph: The slope of the ramp on the west side of the washing shed is 1 in 2.4	
Suggested Plan of Action:	Reconstruct the ramp with a slope of 1 in 12, and provide handrails on both sides of the ramp.	
Suggested Deadline Date:	26 Nov 2014	
Standard:	Alliance Standard Part 6 Section 10 Ramps	
Question:	Emergency power for means of egress illumination is verified at least once per year. If battery operated lights are used, these lights are tested on a monthly basis. Functional testing of battery powered lights is provided for a minimum 90 min once per year.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No record of verifying emergency power for means of egress illumination was found as required.	
Source of Findings:	Document Review: No record of verifying emergency power for means of egress illumination was found.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures that the operation of all means of egress lights is verified at least once per year. If battery-operated lights are used, these lights shall be tested on a monthly basis. Functional testing of battery powered lights shall be provided for a minimum 90 minutes once per year	
Suggested Deadline Date:	09 Jul 2014	
Standard:	Alliance Standards Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape Lighting	
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 signs are placed at entrances to exits but are not provided where there is a change in direction and where the continuation of egress is not obvious.	
Source of Findings:	Visual Assessment: Exit signs are not placed on floors.	
Suggested Plan of Action:	Install illuminated exit signs 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	



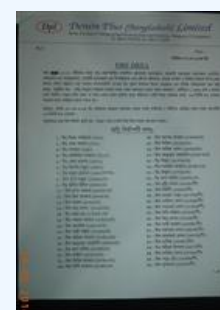
	direction of the path of travel.	
Suggested Deadline Date:	26 Nov 2014	
Standard:	Alliance Standard Part 6 Section 6.11 Exit Signs	
Question:	Emergency power for exit signs is tested at least once per year. If battery operated, these lights are tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No plan or record of conducting periodic tests of the emergency battery back up of illumination of exit signs was found, as demanded in section 10.12.1.4 of Alliance Standard.	
Source of Findings:	Document Review: No plan or record of conducting periodic tests of the emergency battery back up of illumination of exit signs was found during document review.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures that the emergency power for exit signs is tested at least once per year. If battery operated signs are used, these lights are tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year.	
Suggested Deadline Date:	09 Jul 2014	
Standard:	Alliance Standard Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape.	
Question:	Exit signs have appropriate illumination levels and contrasting graphics.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Some exit signs do not have appropriate illumination levels and contrasting graphics.	
Source of Findings:	Photograph: Exit signs have lower illumination levels and contrasting graphics than are acceptable.	
Suggested Plan of Action:	Make sure all required exit signs are illuminated continuously at all times. Exit signs may be illuminated either by lamps external to the sign or by lamps contained within the sign. 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 0.2cd/m2 may also be used.	
Suggested Deadline Date:	26 Nov 2014	



Standard:	Alliance Standard Part 10 Section 10.12.1 Exit Signs	
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:	2	
Description:	Floor level and stair names or designations are not mentioned at each floor entrance from the stairs to the floor in English and Bengali.	
Source of Findings:	Photograph: Stair name or designation is not mentioned on signage.	
Suggested Plan of Action:	Install signage adjacent to each stair door indicating the stair name and the floor level at the noted locations.	
Suggested Deadline Date:	09 Jul 2014	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs	
Fire Safety Programs		
Question:	Training programs are implemented and documented in accordance with the Alliance Safety Training Curriculum.	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	There was no documentation found of any training program in accordance with the Alliance Safety Training Curriculum.	
Source of Findings:	Document Review: There was no documentation found among the documents provided by factory personnel of any training program in accordance with the Alliance Safety Training Curriculum.	
Suggested Plan of Action:	Implement training in accordance with the Alliance Safety Training Curriculum, and keep record with proper documentation.	
Suggested Deadline Date:	09 Jul 2014	
Standard:	Alliance Standards Part 13	
Question:	Are there additional areas of non-compliance to report?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	(1) The enclosure where chemicals and flammable materials are stored is not fire rated. There is a chemical storage area in the washing shed where flammable chemicals were kept. The wall of the chemical store is fire rated,	



	but the roof is made of MS sheets, and near the roof there is finished goods storage. Doors and windows of the chemical storage area are not fire rated near the washing area. There is a spot removing room in the washing shed with solid brick wall partitions where dry solvent is used with compressed air guns and aerosol. The room has no fire door. (2) The elevation difference is 54 inches at one exit in the washing shed, but guards are not provided on both open sides. This condition fails to satisfy Alliance Standard Part 6, Section 6.3.7.
Source of Findings:	Visual Assessment: The chemical store located in the washing shed is not fire separated.
Suggested Plan of Action:	(1) Store chemicals and all flammable materials in approved enclosures in a safe manner. (2) Provide guardrails of a minimum 1067 mm (42 in.) in height on both sides.
Suggested Deadline Date:	07 Jul 2014
Standard:	Not Applicable
Question:	Fire Drills are conducted at required intervals based on building use type.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Fire drills are not conducted under the supervision of a fire safety director, though there were some documents that indicated that fire drills are regularly conducted.
Source of Findings:	Photograph: Photo 1: Fire drill attendance Photo 2: Fire drill record
Suggested Plan of Action:	Fire drills shall be conducted under the direction of a Fire Safety Director.
Suggested Deadline Date:	18 Aug 2014
Standard:	Alliance Standards Part 13 Section 13.3 Fire Drills
Question:	Storage areas underneath the cutting tables are clear of combustibles.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Fabric is stored underneath the cutting tables in the cutting sections on the 3rd floor and 2nd floor.
Source of Findings:	Photograph: Fabric is stored underneath the cutting tables on the 3rd floor.
Suggested Plan of Action:	Remove all combustibles stored underneath the cutting tables at the noted locations in accordance with Alliance Standard Section 13.7.2.





Suggested Deadline Date:	23 Jun 2014	
Standard:	Alliance Standard Part 17 Section 13.7.2 Cutting tables.	
Question:	Fire Department pre-planning has been completed.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	No documentation of fire department pre-planning was found.	
Source of Findings:	Document Review: There was no documentation of fire department pre-planning found among the documents provided by factory personnel.	
Suggested Plan of Action:	Complete and document fire department pre-planning activities with the local Fire Service and Civil Defense.	
Suggested Deadline Date:	09 Jul 2014	
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Question:	A hot-work permit program has been established.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	A hot-work permit program has not been established. However, hot work is taking place in the mechanical workshop at the factory.	
Source of Findings:	Visual Assessment: No hot-work permit was provided by the factory personnel. However, a welding machine is available.	
Suggested Plan of Action:	Develop a hot-work permit program. The program must comply with the requirements of NFPA 51B. In general, this program should address the process of request and approval from authorities, the necessary checks prior to approval, standby fire watch and fire fighting equipment, sounding of alarm procedures, duration and expiry of permit and re-approval procedures, etc.	
Suggested Deadline Date:	26 Nov 2014	
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B	
Question:	A Fire Safety Director position has been filled.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	No record of filling the position of fire safety director was found. However, factory authority has maintained that a fire safety director has been appointed.	



Source of Findings:	Document Review: No record of filling the position of fire safety director was found.	
Suggested Plan of Action:	Create a Fire Safety Director position, and fill the position with an individual that has had sufficient training to be able to carry out the required duties. The duties of the Fire Safety Director shall include the following: (1) Establish internal and external rally points and communicate such to all employees in the building. (2) Fire department pre-planning. (3) Conduct safety inspections as outlined in Alliance standard 13.9. (4) Ensure all testing of fire protection equipment is conducted in accordance with Alliance standard 13.10.	
Suggested Deadline Date:	26 Nov 2014	
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Question:	A written housekeeping policy is established and enforced.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	No written housekeeping policy was found. A record of a team was found, but details regarding the scheduling of cleanings for floors, walls, ceilings, supply and return air ventilation systems, and cleaning delays and rescheduling was not available.	
Source of Findings:	Photograph: A record of a housekeeping team was found.	
Suggested Plan of Action:	Establish written corporate and plant policies on housekeeping to ensure scheduled cleanings for floors, walls, ceilings, and supply and return air ventilation systems. Promptly reschedule skipped cleanings. Provide a documented line of authority for authorizing a cleaning delay and rescheduling. As a general rule the maximum tolerable deposit thickness for loose fluffy lint is 13 mm (½ in.) over a maximum of 46.5 m2 (500 ft2). Limit dense deposits to 6 mm (¼ in.) and oil saturated deposits to 3.2 mm (⅛ in.).	
Suggested Deadline Date:	18 Feb 2015	
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping	