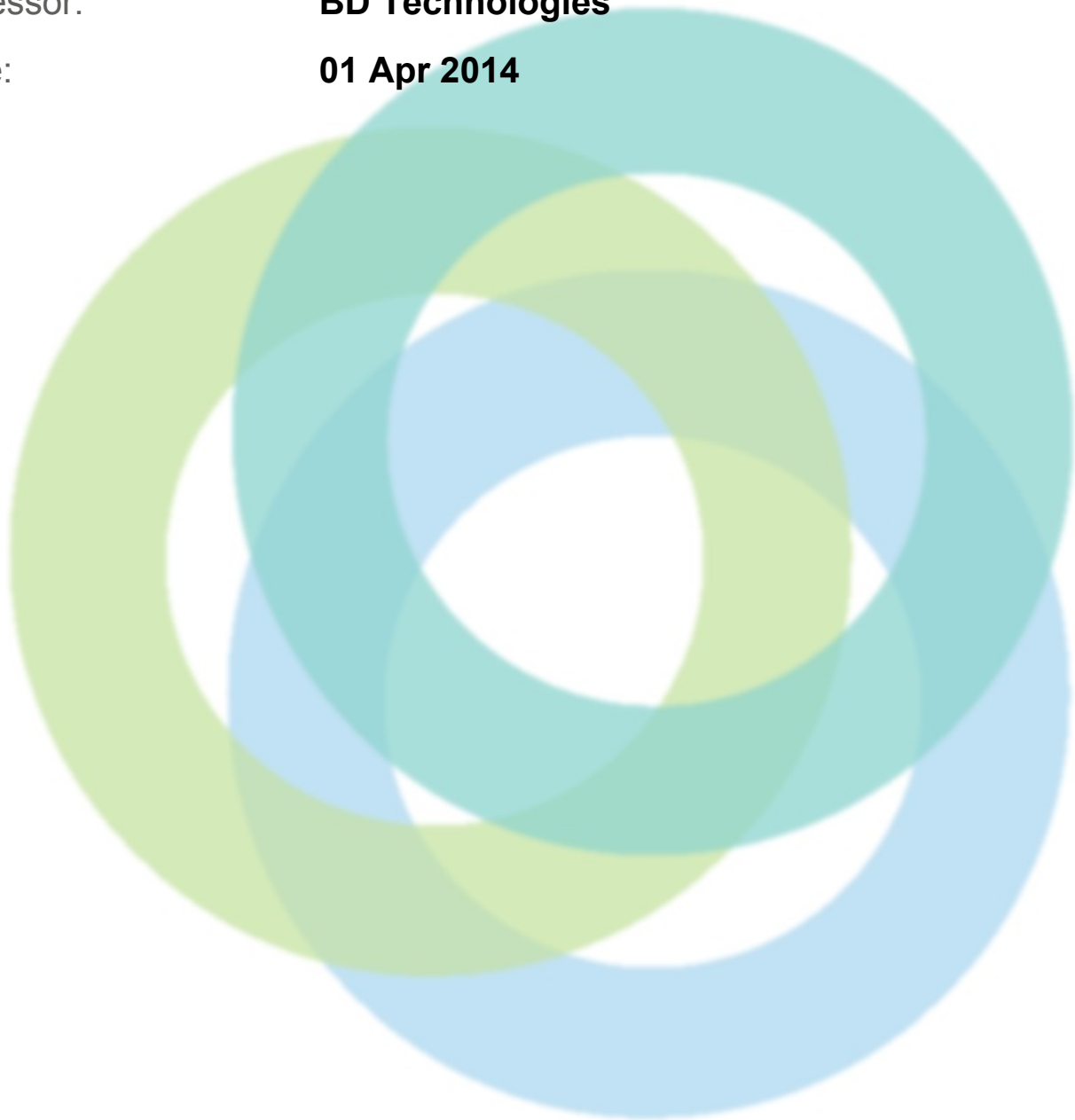


# INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **Shehan Specialized Textile Mills Ltd.**  
Address: **Plot #11-12, Sector #1/A, Road #5 CEPZ, Chittagong  
Chittagong Chittagong Bangladesh**  
Assessor: **BD Technologies**  
Date: **01 Apr 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](http://www.bangladeshworkersafety.org).





## GENERAL INFORMATION

General Information	
Factory Name:	Shehan Specialized Textile Mills Ltd.
Address:	Plot #11-12, Sector #1/A, Road #5 CEPZ, Chittagong Chittagong Chittagong Bangladesh
Country:	Bangladesh
Province:	Chittagong
City:	Chittagong
Zip Code:	4223
Audit Duration:	8 Hours
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	08/04/2014
Final Report Date:	11/04/2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	Building#1-3 story main factory shed building housing the storage, printing, embroidery, finishing and cutting operations, Building#2- 5 story main factory building housing the cutting, finishing, dining section.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	One three storied prefabricated shed building and one five storied R.C.C. Building
Approximate Building Area (SF):	Building#1- Prefabricated shed(67013 x 5 = 201039 sft.), Building#2-R.C.C. Building(28349 x 5= 141745 sft.)
Date of Building Construction:	Prefabricated shed(2008), R.C.C. Building(2011)
Date of Last Building Renovation/Addition:	2011
Ancillary Structures in Complex:	One boiler and substation room, One fire pump room.
Approximate Ancillary Structures Area (SF):	One boiler and substation room (600 sft), One fire pump room (400 sft).

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**ALLIANCE**  
FOR BANGLADESH WORKER SAFETY

Number of Occupants:	G.F. of Both the building(1780), 1st Floor of Both the building(1800), 2nd Floor of Both the building(1000), 3rd Floor of R.C.C. building(200),4th (Dining =480) and 5th(Dining =200),Total=1780+1800+1000+200=4780.
Number of Ancillary Levels (Stories):	Boiler and substation room (level=1, H= 12 ft), Fire pump room (level=1, H= 12).



## ASSESSMENT FINDINGS

### Fire Protection Construction

Question:	Are openings and penetrations through rated walls and/or assemblies protected?
Priority Level:	High
Non-Compliance Level:	3
Description:	1. Boiler room have no fire rated separation 2. Fire pump room, boiler room, generator room and substation adjacent and inter-connected to each other and have no fire separation. There is another transformer room in shed building which is adjacent to production floor but does not have fire rated door.
Source of Findings:	Photograph: Transformer room door.
Suggested Plan of Action:	Provide fire-resistive rated construction barriers between hazard types. Provide 1 hour rated fire barrier and door at boiler room, 2 hr. for generator room and 2 hr. rated fire door for transformer room. Consult a qualified fire protection engineer to design the required rated construction barrier.
Suggested Deadline Date:	01 Aug 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:	Barriers are fire rated but openings (exit doors, windows and penetrations) in stair cases are not fire protected.
Source of Findings:	Photograph: Building#1- stair case opening.
Suggested Plan of Action:	Provide 1.5 hour rated opening protection (fire doors, windows and penetration sealing) for exit enclosure. Consult a qualified fire protection engineer to design the required rated construction barriers and opening protectives, and firestop systems.
Suggested Deadline Date:	01 Aug 2014
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:	There is a lift core in the building# 2 but it has no fire rated opening protection so that it will act like unprotected shaft.
Source of Findings:	Visual Assessment: Unprotected lift core opening in Building# 2.
Suggested Plan of Action:	Provide 1.5 (1 hr if up to 3 story) hour rated opening protection in the lift core as per Alliance Standards Part 4 Section 4.5.7.1 through 4.5.7.
Suggested Deadline Date:	01 Jan 2015
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:	3
Description:	The store room is not provided with a fire rated door.
Source of Findings:	Photograph: Store room unprotected opening.
Suggested Plan of Action:	Provide fire-resistive rated opening and penetration protection for rated walls and assemblies as per Alliance Standard 3.4.2.1.5 & BNBC Part 4. Provide 3/4 hour rated opening protection (fire rated doors, windows, penetration sealing) for the mentioned storage room. Consult a qualified fire protection engineer to design the required opening protective and firestop systems.
Suggested Deadline Date:	01 Aug 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:	None of the buildings have occupancy certificate.
Source of Findings:	Document Review: Certificates of occupancy not found.
Suggested Plan of Action:	Collect occupancy certificate (mention occupancy type) for each building.
Suggested Deadline Date:	11 Aug 2014
Standard:	Are certificates of occupancy provided for each building or ancillary structure?





Question:	Occupancy Type	
Priority Level:		
Non-Compliance Level:		
Description:	Occupancy Type is not mentioned in any document (Drawing or fire license). So that, assumed as per physical assessment.	
Source of Findings:		
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:	Construction Type is not mentioned in any document (Drawing or fire license). So that, assumed as per physical assessment.	
Source of Findings:		
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:		
Source of Findings:		
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.	
<b>Fire Protection Systems</b>		
Question:	Does the building have a Standpipe System?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Standpipe hose systems are undersized (1 inch.) as per class-II (1.5 inch.) and there is no provision for class-I (2.5 inch) standpipe connection.	
Source of Findings:	Photograph: Undersized standpipe system at building# 1	
Suggested Plan of Action:	Install a standpipe system at required locations (class-II standpipe hose connection provisions and class-I hose connections at the required stair cases on each level) designed by a qualified fire protection engineer as per NFPA 14.	
Suggested Deadline Date:	01 Aug 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:	There is a 30 Hp power electric pump but which is not installed according to NFPA 20. Power connection switch was found off and pump is not started automatically upon operation of a hose station. The pump arrangement will create air blockage and control valves are not supervised or locked in the open position. It is very difficult to reach the fire pump room.	
Source of Findings:	Visual Assessment: As per overview of the fire pump.	
Suggested Plan of Action:	Install a fire pump system according to NFPA 20 with minimum pressure of 450 kPa (65 psi) at the hydraulically most remote hose connection. Provide access to the fire pump.	
Suggested Deadline Date:	01 Nov 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:	Some leakage in standpipe system was noted on various floors of main building.
Source of Findings:	Visual Assessment: As per overview of the factory standpipe system.
Suggested Plan of Action:	Repair or replace damaged piping at the noted locations. Repairs and replacements must comply with NFPA 14 and NFPA 25.
Suggested Deadline Date:	01 Nov 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:	No fire department connections were located.
Source of Findings:	Visual Assessment: Overview of the factory.
Suggested Plan of Action:	Install fire department connections where required and in compliance with the Alliance Standard. Connections shall match the Fire Service and Civil Defense hose thread standard. It will allow fire department pumper vehicles to draw water from ground -level or underground water storage tanks as well as it will have provision of inlet connection to feed the hose system.
Suggested Deadline Date:	01 Nov 2014
Standard:	Alliance Standard Part 5 Section 5.5.4 Fire Department Connections
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:	Fire alarm and detection systems are not monitored by a central station. They are stand alone type.
Source of Findings:	Visual Assessment: As per overview of the factory alarm system.
Suggested Plan of Action:	Install a new automatic fire alarm and detection system. Once installed, arrange for direct connection of the system to a central station monitoring service or the Fire Service and Civil Defence as per Alliance Standard Part 5 Section 5.7.5 Monitoring. Until that time that a central station monitoring service or direct connection to the Fire Service and Civil Defence can be set up, 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:	03 Sep 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:	Building has standpipe only for hose system but no inspection, maintenance, and testing records were located.	
Source of Findings:	Visual Assessment: Overview of the factory standpipe testing document.	
Suggested Plan of Action:	Establish an inspection, maintenance, and testing program for the standpipe and hose system. Program must comply with the requirements of NFPA 25.	
Suggested Deadline Date:	01 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:	No signage found for standpipe system.	
Source of Findings:	Visual Assessment: No signage found for standpipe system.	
Suggested Plan of Action:	Install required identification signs at the noted locations. Signage must comply with NFPA 14.	
Suggested Deadline Date:	01 Aug 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:	There are no proper document for inspection, maintenance, and testing procedures of the fire pump.	
Source of Findings:	Document Review: Proper document not found.	



Suggested Plan of Action:	Establish an inspection, maintenance, and testing program for the fire pump. Program must comply with NFPA 25.	
Suggested Deadline Date:	01 Nov 2014	
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps	
<b>Means of Egress</b>		
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:	3	
Description:	On Ground Floor and 1st floor some aisles clear width are less than 36 in. Also in many locations aisles are not properly marked and directional sign to exit points are not clear.	
Source of Findings:	Visual Assessment: Overview of the factory production floor.	
Suggested Plan of Action:	Provide minimum 36 in. wide exit access aisles and minimum aisle widths necessary for the occupant loads. Provide aisle markings with proper direction. Keep aisles free of obstructions.	
Suggested Deadline Date:	01 Aug 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:	All doors in a means of egress are of the side-hinged swinging type.	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	Many doors are sliding/shutter type.	
Source of Findings:	Photograph: Shutter door (Typical)	
Suggested Plan of Action:	Provide side-hinged swinging type doors in all means of egress as per Alliance Standards Part 6 Section 6.8.	
Suggested Deadline Date:	25 May 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	





Question:	The path of egress along the means of egress is not reduced at any point along the path of travel and is sufficient for the occupant load.
Priority Level:	High
Non-Compliance Level:	2
Description:	In some places aisle width is reduced along the path of travel.
Source of Findings:	Photograph: Reduced aisle width.
Suggested Plan of Action:	Modify the egress aisles to maintain the required minimum width along the entire path. The aisle width should not be reduced along the path of travel.
Suggested Deadline Date:	01 Aug 2014
Standard:	Alliance Standard Part 6 Section 6.5 Egress Width and BNBC Table 4.3.2
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:	Doors are found open in the audit period but they have locking devices.
Source of Findings:	Visual Assessment: As per overview the factory exit doors.
Suggested Plan of Action:	Remove all hasps, locks, slide bolts, or other locking devices at the noted locations as per Alliance Standards Part 6 Section 6.8.
Suggested Deadline Date:	20 Aug 2014
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates
Question:	All paths of egress are provided with compliant means of illumination.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	All aisles, exits and stairs are not provided with proper illumination.
Source of Findings:	Visual Assessment: As per overview of the factory.
Suggested Plan of Action:	Install appropriate means of illumination at the noted locations. Provide additional emergency lighting fixtures to provide a minimum lighting level of 2.5 lux for all aisles in production and storage areas and 10 lux for all exits and stairs. Consult a qualified fire protection engineer to determine the detailed locations as needed.
Suggested Deadline	01 Nov 2014





Date:		
Standard:	Alliance Standards Part 6 Section 6.7 Egress Illumination and Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape	
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:	Emergency power for means of egress testing documentation not found.	
Source of Findings:	Document Review: There is no testing document for emergency power inspection.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures the operation of all exists signs is verified at least once per year. If battery-operated signs are used, these lights shall be tested on a monthly basis. Functional testing of battery powered signs shall be provided for a minimum 90 min once per year.	
Suggested Deadline Date:	01 Jun 2014	
Standard:	Alliance Standards Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape Lighting	
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:	Proper documentation not found for testing of Emergency power.	
Source of Findings:	Document Review: Proper documentation not found.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures 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:	01 Jun 2014	
Standard:	Alliance Standard 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:	2	
Description:	Handrails are provided only one side of each stairway.	
Source of Findings:	Visual Assessment: As per overview of the factory.	
Suggested Plan of Action:	Provided handrails on both sides of each stairway. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.). Mount handrails height in between 30 in. to 44 in.	
Suggested Deadline Date:	01 Nov 2014	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards	
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:	1	
Description:	Occupant loads are not posted in any place.	
Source of Findings:	Visual Assessment: As per overview of the factory.	
Suggested Plan of Action:	Post occupant loads for every assembly and production floor in a conspicuous space near the main exit or exit access doorway for the space.	
Suggested Deadline Date:	01 Jun 2014	
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	
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:	Stair designation signs are not provided for the factory building.	
Source of Findings:	Visual Assessment: As per overview of the factory.	
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:	01 Jun 2014	
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	



Date:		
Standard:	Alliance Standard Part 6 Section 6.9 Stairs	
<b>Fire Safety Programs</b>		
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:	Required number of people are not trained and certified in fire fighting, first aid, and rescue training.	
Source of Findings:	Document Review: There is no training document.	
Suggested Plan of Action:	Arrange sufficient training programs for fire fighting, first aid, and rescue training and make proper documentations and keep evidence for Alliance review. Train sufficient number (25%) of workers for fire fighting and emergency purposes.	
Suggested Deadline Date:	01 Nov 2014	
Standard:	Alliance Standard Part 13 Human Element Programs	
Question:	Training programs are implemented and documented in accordance with the Alliance Safety Training Curriculum.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Factory does not have proper documentation for training programs.	
Source of Findings:	Document Review: There is no training program documents.	
Suggested Plan of Action:	Training programs need to be implemented and documented in accordance with the Alliance Safety Training Curriculum.	
Suggested Deadline Date:	01 Jun 2014	
Standard:	Alliance Standards Part 13	
Question:	Fire Department pre-planning has been completed.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Factory does not have a Fire Department pre-planning program.	
Source of Findings:	Document Review: Fire Department pre-planning not found.	



Suggested Plan of Action:	Complete and document fire department pre-planning activities with the local Fire Service and Civil Defende.
Suggested Deadline Date:	01 Jun 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:	Documentation of a housekeeping policy was not found.
Source of Findings:	Document Review: Documentation of a housekeeping policy was not found.
Suggested Plan of Action:	Establish written corporate and plant policies on housekeeping to ensure scheduled cleaning for floor, wall, ceiling, 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:	01 Feb 2015
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping