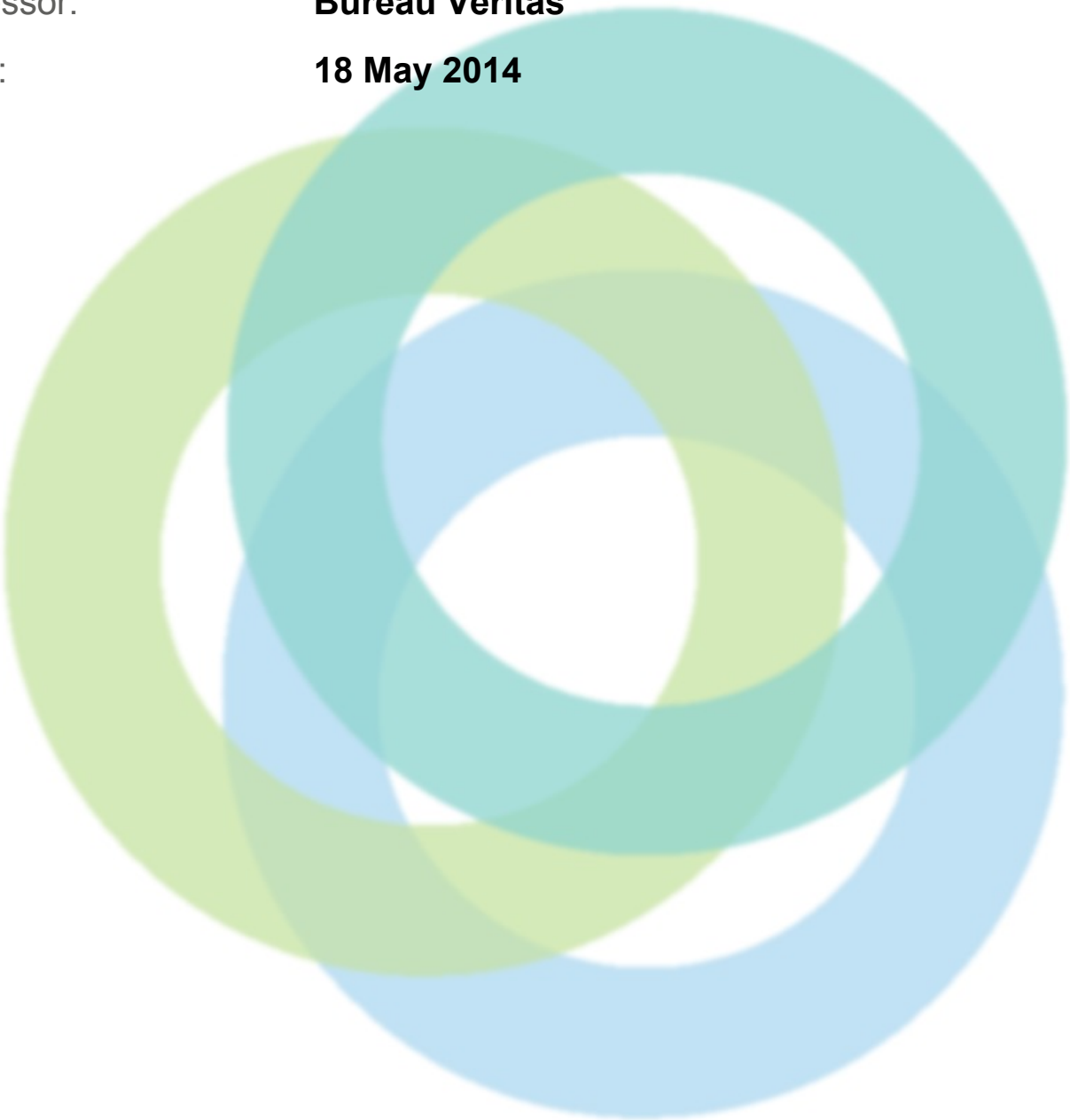


INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **Cosmopolitan Industries (Pvt) Ltd**
Address: **Khejur Bagan, Mouja: Baro Ashulia, Ashulia, Savar
Ashulia, Savar Dhaka Bangladesh**
Assessor: **Bureau Veritas**
Date: **18 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:	Cosmopolitan Industries (Pvt) Ltd
Address:	Khejur Bagan, Mouja: Baro Ashulia, Ashulia, Savar Ashulia, Savar Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Ashulia, Savar
Zip Code:	1341
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	05-19-2014
Final Report Date:	06-21-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	There are 6 buildings in the factory premises out of which one is main production building and five are ancillary buildings. The buildings are named as: 1) Six story main production building, 2) Two story utility building, 3) Two story office building, 4) Two story medical & day care (RCC building), 5) Single story RCC building (security, RMS & drivers waiting room), 6) One-story with 2 levels of catwalk prefab shed (warehouse).
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	1) Six story main production building: Building height (Highest occupied floor level): 15.24 m or 50 ft [Height up to roof: 18.29 m or 60 ft], Stories above grade: 6, Stories below grade: 0, Occupied levels: 6, 2) Two story utility building: Building height (Highest occupied floor level): 3.05 m or 10 ft [Height up to roof: 6.10 m or 20 ft], Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 3) Two story office building: Building height (Highest occupied floor level): 3.05 m or 10 ft [Height up to roof: 6.10 m or 20 ft], Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 4) Two story medical & day care (RCC building): Building height (Highest occupied floor level): 3.05 m or 10 ft [Height up to roof: 6.10 m or 20 ft], Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, And see the description.
Approximate Building Area (SF):	Total area of all buildings in the factory premises: 394945 sft. Building wise breakdown as follows: 1) Six story main production building: 329827 sft (Ground floor: 59800 sft, 1st floor: 36888 sft, 2nd floor: 61300 sft, 3rd floor: 61300 sft, 4th floor: 61300 sft, 5th floor: 49239 sft). 2) Two story utility building: 19594 sft (Ground floor: 11634 sft, 1st floor: 7960 sft). 3) Two story office building: 4264 sft (Ground floor: 2132 sft, 1st floor: 2132 sft). 4) Two story medical & day care (RCC building): 4076 sft (Ground floor: 2038 sft, 1st floor: 2038 sft). 5) Single story RCC building (security, RMS & drivers waiting room): 732 sft. 6) One-story with 2 levels of catwalk



	prefab shed (warehouse): 36452 sft (Ground floor: 14092 sft, 1st floor: 11180 sft, 2nd floor: 11180 sft).
Date of Building Construction:	Factory personnel informed the date of construction as follows: 1) Six story main production building: Finished in 2005, 2) Two story utility building: Finished in 2005, 3) Two story office building: Finished in 2008, 4) Two story medical & day care (RCC building): Finished in 2010, 5) Single story RCC building (security, RMS & drivers waiting room): Finished in 2005, 6) One-story with 2 levels of catwalk prefab shed (warehouse): Finished in 2010.
Date of Last Building Renovation/Addition:	No record for date of renovation or addition was found from factory personnel.
Ancillary Structures in Complex:	1) Two story utility building, 2) Two story office building, 3) Two story medical & day care (RCC building), 4) Single story RCC building (security, RMS & drivers waiting room), 5) One-story with 2 levels of catwalk prefab shed (warehouse).
Approximate Ancillary Structures Area (SF):	1) Two story utility building: 19594 sft (Ground floor: 11634 sft, 1st floor: 7960 sft). 2) Two story office building: 4264 sft (Ground floor: 2132 sft, 1st floor: 2132 sft). 3) Two story medical & day care (RCC building): 4076 sft (Ground floor: 2038 sft, 1st floor: 2038 sft). 4) Single story RCC building (security, RMS & drivers waiting room): 732 sft. 5) One-story with 2 levels of catwalk prefab shed (warehouse): 36452 sft (Ground floor: 14092 sft, 1st floor: 11180 sft, 2nd floor: 11180 sft).
Number of Occupants:	Total number of occupants: 4720. 1) Six story main production building: 4449 (Ground floor: 320, 1st floor: 454, 2nd floor: 1375, 3rd floor: 1350, 4th floor: 750, 5th floor: 200), 2) Two story utility building: 40 (Ground floor: 30, 1st floor: 10), 3) Two story office building: 34 (Ground floor: 16, 1st floor: 18), 4) Two story medical & day care (RCC building): 12 (Ground floor: 5, 1st floor: 7), 5) Single story RCC building (security, RMS & drivers waiting room): 109, 6) One-story with 2 levels of catwalk prefab shed (warehouse): 76 (Ground floor: 56, 1st floor: 10, 2nd floor: 10).
Number of Ancillary Levels (Stories):	1) Two story utility building: Building height (Highest occupied floor level): 3.05 m or 10 ft [Height up to roof: 6.10 m or 20 ft], Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 2) Two story office building: Building height (Highest occupied floor level): 3.05 m or 10 ft [Height up to roof: 6.10 m or 20 ft], Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 3) Two story medical & day care (RCC building): Building height (Highest occupied floor level): 3.05 m or 10 ft [Height up to roof: 6.10 m or 20 ft], Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 4) Single story RCC building (security, RMS & drivers waiting room): Building height (Highest occupied floor level): 30 cm or 1 ft above grade [Height up to roof: 2.9 m or 9.5 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, And see the description.
Occupancy Type:	1) Six story main production building: [Ground floor: G2 (Sample section), G2 (Washing), G2 (Wrinkle free), J2 (Chemical store), 1st floor: G2 (Finishing), H2 (Sub-store), H2 (Accessories store), G2 (Packing area), 2nd floor: F1 (Office), G2 (Sewing), 3rd floor: F1 (Office), G2 (Sewing), 4th floor: G2 (Cutting), G2 (Finishing), 5th floor: G2 (Cutting), G2 (Embroidery), G2 (Printing), E3 (Dining), E3 (Canteen), E3 (Prayer room), H2 (Finished goods store)], 2) Two story utility building: [Ground floor: K (Boiler), K (Generator), 2nd floor: F1 (Utility office)], 3) Two story office building: [Ground floor: F1 (HR & Warehouse office), 1st floor: E4 (Training centre)], 4) Two story medical & day care (RCC building): [Ground floor: B2 (Day care), 1st floor: D1 (Medical centre)], 5) Single story RCC building (security, RMS & drivers waiting room): F1 (Security office), and see description.
Construction Type:	1) Six story main production building: [Ground floor to 4th floor: Type 1, 5th floor: Non-rated (Some portion of ceiling)], 2) Two story utility building: [Ground floor: Type 1, 1st floor: Non-rated (Only ceiling)], 3) Two story office building: [Ground floor: Type 1, 1st floor: Non-rated (Only ceiling)], 4) Two story medical & day care (RCC building): Type 1, 5) Single story RCC building (security, RMS & drivers waiting room): Type 1, 6) One-story with 2 levels of catwalk prefab shed (warehouse): Non-rated.
Height of Highest Occupied Floor Level Above Grade:	1) Six story main production building: 15.24 m or 50 ft, 2) Two story utility building: 3.05 m or 10 ft, 3) Two story office building: 3.05 m or 10 ft, 4) Two story medical & day care (RCC building): 3.05 m or 10 ft, 5) Single story RCC building (security, RMS & drivers waiting room): 30 cm or 1 ft above grade, 6) One-story with 2 levels of catwalk prefab shed (warehouse): 7.31 m or 24 ft.

Factory Name: **Cosmopolitan Industries (Pvt) Ltd**
Address: **Khejur Bagan, Mouja: Baro Ashulia, Ashulia, Savar Ashulia, Savar Dhaka Bangladesh**

Assessor: **Bureau Veritas**

Date: **18 May 2014**



ALLIANCE
FOR BANGLADESH WORKER SAFETY



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:	In every floor of main building at stair-1 and stair-2, stairwell windows are located within 10 ft of production floor window. Doors and windows of generator and boiler rooms are open on ground floor near production floor. On 1st floor of utility building, the distance between compressor room and engineering department office is 12 ft.	
Source of Findings:	Visual Assessment: Openings and penetrations through rated walls at different locations are not fire protected.	
Suggested Plan of Action:	Install listed firestop systems at every penetration through fire rated walls and assemblies. Install listed firestop systems at every penetration through fire rated walls and assemblies.	
Suggested Deadline Date:	10 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:	Is each floor separated with a fire-resistive rated construction barrier?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	All the floors of main building are separated by fire resistive rated construction barrier. The warehouse building is a one story building with two catwalk levels. But the levels are separated by non rated construction.	
Source of Findings:	Visual Assessment: The catwalk levels of warehouse were found to be separated by non rated construction.	
Suggested Plan of Action:	Install automatic sprinkler protection throughout the existing non-rated warehouse building as per NFPA 13 (2013) Section 20.5.	
Suggested Deadline Date:	10 Sep 2014	
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	



Question:	Are exit enclosures provided with fire-resistive rated construction barriers?
Priority Level:	High
Non-Compliance Level:	2
Description:	There are 6 stairs in the 6-storied main production building. Fire doors are installed at every floor excluding mezzanine floor, but these doors do not have any credible certificate. The doors on these stairs need to be 1.5 hour rated as per clause 4.5 and 4.6 of Alliance Standard.
Source of Findings:	Visual Assessment: Fire doors are available but not certified.
Suggested Plan of Action:	Remove all existing gates and doors in the means of egress. Install fire rated door at the stairs that are listed, approved, permanently labeled, in compatible fire rated frames with latching panic hardware. Outward opening, side-swinging, self-closing, non-lockable fire doors must have 1.5 hr rating in all stairwell enclosures. Consult a qualified fire protection engineer to design the required rated construction barriers.
Suggested Deadline Date:	10 Sep 2014
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:	3
Description:	In-process goods are kept haphazardly on various floors not maintaining the dimensions according to the requirement for miscellaneous store (area 250 sft, height 8 ft, separation from adjacent area 10 ft) as per clause 3.4.2.1.6. Occupancy separations are not fire rated and the protected opening are not fire rated as well. Finished good store & dining, as well as cutting section & dining on 4th floor, are not separated by fire-resistive rated construction barriers. Office and production area on 1st floor and on 2nd floor are not separated by fire-resistive rated construction barriers. Chemical store with production floor on ground floor is separated by fire door (Door test report not available), and on ground floor, there is no separation between production and office. On mezzanine floor, there is no separation between finishing section (G2) and sub-store (H2). These different occupancies need to be fire separated according to Alliance Standard Part 3 Section 3.4.2.1 and BNBC Table 3.2.1 (pg-10352).
Source of Findings:	Visual Assessment: Occupancy separations between hazards are required at different locations in the buildings.
Suggested Plan of Action:	Keep the dimensions of in process storage within the requirements of miscellaneous storage as per Alliance Standard Section 3.4.2.1.6 or provide 1 hr fire separation as per Alliance Standard Section 3.4.2.1.5. Separate the production area at above mentioned locations with fire resistive construction barriers following the requirements of Table 3.2.1 of BNBC Part 3.
Suggested Deadline	03 Dec 2014





Date:		
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 occupancy certificate is available for any building on the factory premises.	
Source of Findings:	Document Review: There was no occupancy certificate for any of the buildings.	
Suggested Plan of Action:	Apply to Savar Pouroshova for issuance of occupancy certificate and pursue the matter to expedite.	
Suggested Deadline Date:	30 Jul 2014	
Standard:	Are certificates of occupancy provided for each building or ancillary structure?	
Fire Protection Systems		
Question:	Is the building protected by an automatic sprinkler system?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Height of the highest occupied level of the main building is 50 ft (15.24 m). Other buildings are shorter than the main building. Since the aforementioned height is less than 23 m or 75 ft, an automatic sprinkler system is not required for any of these buildings as per Alliance Standard Section 5.3. However, an automatic sprinkler system is available throughout the One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store on ground floor of main building, but the existing sprinkler system is not according to NFPA 13.	
Source of Findings:	Visual Assessment: During site tour, no sprinkler system was found installed except in warehouse and chemical store.	
Suggested Plan of Action:	Either renovate or replace the existing sprinkler system at One-story with 2 levels of catwalk prefab shed (warehouse) following the requirements of NFPA 13 (2013) Section 20.5. Submit product data, drawings and hydraulic calculations and secure approvals before construction.	
Suggested Deadline Date:	27 Apr 2015	
Standard:	Reference Alliance Standards Part 3 Section 3.5.3 Existing Buildings, Part 5 Section 5.3 Automatic Sprinkler Systems and Section 6.13 Travel Distance	

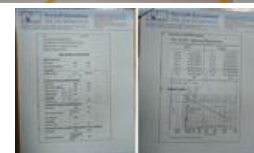


Question:	Are sprinklers spaced and installed at the required heights in order to provided required coverage and protection?
Priority Level:	High
Non-Compliance Level:	2
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. Sprinklers are spaced at 15 ft interval and installed at ceiling. But the available hydraulic design for the existing sprinkler system is not in compliance with NFPA 13.
Source of Findings:	Visual Assessment: Sprinkler spacing and installation height was measured during audit.
Suggested Plan of Action:	Sprinklers shall be spaced and installed following the requirements of NFPA 13.
Suggested Deadline Date:	27 Apr 2015
Standard:	Reference NFPA 13
Question:	Are storage racks and shelves compliant based on class of commodity storage?
Priority Level:	High
Non-Compliance Level:	2
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. Commodities are stacked in racks. The NFPA compliant hydraulic design was not found during audit.
Source of Findings:	Document Review: NFPA compliant hydraulic design was not available.
Suggested Plan of Action:	Storage racks shall be compliant with NFPA 13.
Suggested Deadline Date:	27 Apr 2015
Standard:	Reference NFPA 13 Chapter 13, 14, 15, 16, or 17





Question:	Does the building have a Standpipe System?
Priority Level:	High
Non-Compliance Level:	2
Description:	Height of the highest occupied floor of the main building is above 15.24 m(50 ft) above grade. Class-III standpipe system needs to be installed throughout the building, as the highest occupied floor level is more than 10 m (33 ft) above grade as per Alliance Standard 5.4.2. Class-I Standpipe system is available at 3 stairwells out of 6 stairs of the main building and class-II standpipe system is also available in floors. Class-I standpipe system at stairwells and class-II standpipe system in floors is installed at One story with 2 levels of catwalk prefab shed (warehouse). But the available hydraulic design for the installed standpipe system is not compliant with NFPA 14.
Source of Findings:	Document Review: Hydraulic design, drawing, and calculation for installed stand pipe system are not compliant with NFPA 14.
Suggested Plan of Action:	Modify the existing standpipe system of main building following the requirements of NFPA 14 and also obtain the approved hydraulic calculation for the installed standpipe system of the factory buildings.
Suggested Deadline Date:	10 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:	There is a fire pump available on the factory premises. The throw of jet at highest accessible point is more than 50 ft, but no approved design with hydraulic calculation is available as per NFPA 20.
Source of Findings:	Visual Assessment: Fire pump is available on the factory premises but not in accordance with NFPA 20.
Suggested Plan of Action:	Design and install a listed fire pump system to supply the demand of standpipe system. Submit product data, drawings and hydraulic calculations and secure approvals before construction.
Suggested Deadline Date:	10 Sep 2014
Standard:	Alliance Standard Part 5 Fire Protection Systems





Question:	Are hangers, bracing, and restraints properly installed and supporting the system piping?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. No approved hydraulic calculation is available for the installed system. Visually it seems that hangers and restraints supporting sprinkler system are sufficient, but no bracing is provided for the sprinkler piping.
Source of Findings:	Document Review: Hydraulic design for the existing sprinkler system is not in compliance with NFPA 13.
Suggested Plan of Action:	Ensure all hangers, bracing and restraints are properly installed and support the system piping at the noted locations following NFPA 13 Chapter 9.
Suggested Deadline Date:	27 Apr 2015
Standard:	Reference NFPA 13 Chapter 9 Hanging, Bracing, and Restraint of System Piping.
Question:	All valves controlling the automatic sprinkler systems are electrically supervised by a listed fire alarm system control unit.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. Valves controlling the automatic sprinkler systems are not electrically supervised.
Source of Findings:	Visual Assessment: Valves controlling the sprinkler system are not electrically supervised.
Suggested Plan of Action:	Provide electrically supervised devices on the valves controlling the automatic sprinkler systems. Devices are to be supervised by a listed fire alarm system control unit. Modify existing fire alarm and detection system to provide supervision of required valves.
Suggested Deadline Date:	27 Apr 2015
Standard:	Reference Alliance Standard Part 5 Section 5.3.5 Supervision and Alarms.





Question:	Aisles in storage areas are free of storage based on design criteria used for the sprinkler system.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. The NFPA compliant hydraulic design was not available during audit. However aisles were found storage free.
Source of Findings:	Document Review: NFPA compliant hydraulic design was not found during audit.
Suggested Plan of Action:	Modify the existing sprinkler system following the requirements of NFPA 13 (2013) Section 20.5 and obtain approved hydraulic design.
Suggested Deadline Date:	27 Apr 2015
Standard:	Alliance Standard Part 5 Section 5.3.6.3
Question:	All storage is maintained with a 460 mm (18 in.) minimum clearance from the top of storage to the sprinkler deflector.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. Minimum clearance from the top of storage to the sprinkler deflector was not maintained.
Source of Findings:	Visual Assessment: Minimum clearance from the top of storage to the sprinkler deflector was not found during audit.
Suggested Plan of Action:	Remove all storage items that encroach on the minimum clearance distance (18 in) to the sprinkler deflector.
Suggested Deadline Date:	27 Apr 2015
Standard:	Reference Alliance Standards Part 5 Section 5.3.6.1 Storage Clearance
Question:	Standpipe system piping is free of mechanical damage, leakage, and corrosion?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	All existing standpipe system piping is free of mechanical damage, leakage, and corrosion. However, a complete standpipe system is not installed throughout the main building in accordance with NFPA 14.





Source of Findings:	Visual Assessment: Mechanical damage, leakage, and corrosion were not found in the available standpipe system.
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.
Suggested Deadline Date:	09 Dec 2014
Standard:	NFPA 25 Chapter 6 Standpipe and Hose Systems
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 at regular intervals but not in accordance with NFPA 10 Chapter 7.
Source of Findings:	Document Review: No document regarding the inspection, maintenance, and testing procedure of fire extinguishers was found in the documents shown by the factory personnel.
Suggested Plan of Action:	Fire extinguishers are to be inspected, tested, and maintained in accordance with NFPA 10 Chapter 7.
Suggested Deadline Date:	03 Dec 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:	Automatic fire alarm and detection system is available in the factory, but there is currently no monitoring company in Bangladesh. Fire service and civil defense is also not capable of monitoring fire alarm and detection systems of the factories.
Source of Findings:	Visual Assessment: No central station for monitoring service is available.
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 that time that monitoring can be set up, arrange a monitoring system using 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:	30 Jul 2014



Standard:	Alliance Standard Part 5 Section 5.7.5 Monitoring	
Question:	Are inspection, maintenance, and testing procedures of the sprinkler system documented and up to date?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. Inspection, maintenance, and testing procedures of the sprinkler system as per NFPA 25 chapter 5 Table 5.1.1.2 is not documented.	
Source of Findings:	Document Review: No document regarding inspection, maintenance and testing procedure of the sprinkler system was found during audit.	
Suggested Plan of Action:	Establish an inspection, maintenance, and testing program following the requirements of NFPA 25.	
Suggested Deadline Date:	27 Apr 2015	
Standard:	Reference NFPA 25 Chapter 5 Sprinkler Systems Table 5.1.1.2	
Question:	Are identification signs for the sprinkler system installed at the required locations?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. Identification signs for the sprinkler system are not installed at the required locations as per NFPA 13.	
Source of Findings:	Visual Assessment: No identification sign was found for the installed sprinkler system.	
Suggested Plan of Action:	Install identification signage at the required locations. The five basic types of identification signs are as follows: Type A- Control Valve Sign Type B- Multi-Purpose Text Signs (See Below) Type D- Fire Alarm Sign Type E- Hydraulic Calculation Sign. Reference NFPA 13 for signage requirements.	
Suggested Deadline Date:	27 Apr 2015	
Standard:	Reference NFPA 13	
Question:	Does the automatic sprinkler system have an approved audible device activated by waterflow equal to the flow of one sprinkler?	
Priority Level:	Low	
Non-Compliance Level:	2	



Description:	Automatic sprinkler systems are available in One-story with 2 levels of catwalk prefab shed (warehouse) and in chemical store of main building. No such audible device was found for the existing sprinkler system.	
Source of Findings:	Visual Assessment: No approved audible device was found in the existing sprinkler system.	
Suggested Plan of Action:	Install an approved audible device connected to the automatic sprinkler system and activated by water flow equal to the flow of one sprinkler. The waterflow switch for the sprinkler system shall be monitored by the fire alarm system. Activation of the waterflow shall activate the fire alarm notification appliances.	
Suggested Deadline Date:	27 Apr 2015	
Standard:	Reference Alliance Standards Part 5 Section 5.3.5.2 Alarms.	
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:	Inspection, maintenance, and testing procedures of the available standpipe and hose are not documented and up-to-date.	
Source of Findings:	Document Review: No document regarding inspection, maintenance, and testing procedure of standpipe and hose system was found among the documents shown by the factory personnel.	
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 Chapter 6 Table 6.1.1.2.	
Suggested Deadline Date:	03 Dec 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:	Standpipe systems are clearly visible at production area, but no signage is available for the standpipe system at required locations and on required components according to NFPA 14 Chapter 6.	
Source of Findings:	Visual Assessment: No signage for the standpipe system was found in the building.	



Suggested Plan of Action:	Install required identification signs at the noted locations. Signage must comply with NFPA 14 Chapter 6.	
Suggested Deadline Date:	30 Jul 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:	Inspection, maintenance, and testing procedures of the fire pump are not documented and up to date.	
Source of Findings:	Document Review: No document regarding inspection, maintenance, and testing procedures of fire pump was found among the documents shown by the factory personnel.	
Suggested Plan of Action:	Establish an inspection, maintenance, and testing program for the fire pump. Program must comply with NFPA 25.	
Suggested Deadline Date:	03 Dec 2014	
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps	
Means of Egress		
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:	3	
Description:	There are collapsible gates and doors which look like fire doors with locking arrangements at each egress location.	
Source of Findings:	Visual Assessment: Locking devices were noticed at exit doors.	
Suggested Plan of Action:	Remove all existing gates and non-approved doors in the means of egress including all locking devices. Install approved fire doors with compliant panic hardware that cannot be locked in the direction of egress under any conditions.	
Suggested Deadline Date:	30 Jul 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
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:	3
Description:	The external stair of this building does not have a fire separation from the building beyond 10 feet of its span.
Source of Findings:	Visual Assessment: Exterior exit stair is not fire separated from the building.
Suggested Plan of Action:	Fill windows and similar opening that are within 10 feet of the stairs with fire rated construction, or install fire shutters.
Suggested Deadline Date:	10 Sep 2014
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:	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:	2
Description:	Aisle widths at cutting unit-1 (3rd floor) and at cutting section (4th floor) of main building are 0.84 m and 0.50m respectively.
Source of Findings:	Visual Assessment: Aisle widths were found to be 0.50 m and 0.84 m.
Suggested Plan of Action:	Remove existing aisle marking and draw new marking fulfilling the minimum aisle width requirement. Relocate the machines accordingly if necessary.
Suggested Deadline Date:	10 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:	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:	2
Description:	Door widths are more than 0.8m. Some are collapsible and swinging glass doors. Visually, some of the doors were found to be fire doors. However, no credible certificate is available. Fire doors of proper rating are required in accordance with section 6.3.1.2.2 and 4.6.
Source of Findings:	Visual Assessment: Some swinging glass doors were found in the main building.





Suggested Plan of Action:	Install fire doors of required ratings that are listed, permanently labeled, swinging, automatic-closing, in compatible fire rated frames with latching panic hardware. Submit product data for approval before construction.	
Suggested Deadline Date:	10 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:	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 any assembly and production floor.	
Source of Findings:	Visual Assessment: Occupant loads are not posted in any assembly.	
Suggested Plan of Action:	Post the occupant load for every assembly and production floor in a facility in a conspicuous space near the main exit or exit access doorway for the space.	
Suggested Deadline Date:	30 Jul 2014	
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	
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:	Documents of periodical testing of emergency power for means of egress were found. However, those documents were not in compliance with Alliance Standards.	
Source of Findings:	Document Review: Relevant documents were not in compliance with Alliance Standards.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures the operation of all exit 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:	30 Jul 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:	No plan or record of conducting periodic tests for the emergency battery backup for illumination of exit signs was found.	
Source of Findings:	Visual Assessment: No document regarding testing of emergency power for exit signs was found among the documents shown by the factory personnel.	
Suggested Plan of Action:	Since 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:	30 Jul 2014	
Standard:	Alliance Standard Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape.	
Question:	Every door in a stair enclosure serving more than 5 stories is provided with re-entry unless it meets the requirements of Alliance Standards Part 6 Section 6.8.3.1.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The main building is 6 storied, but doors are not provided with re-entry. Stair doors with re-entry are required in at least 2 floors.	
Source of Findings:	Visual Assessment: No re-entry door was found.	
Suggested Plan of Action:	Every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets the following requirements: Stair doors may be permitted to be locked from the stair (ingress) side that prevents re-entry to the floor, provided that at least two floors allowing re-entry to access another exit are provided, there are not more than 4 stories intervening between re-entry floors, re-entry is allowed on the top or next to top level, reentry doors are identified as such on the stair side, and locked doors shall be identified as to the nearest re-entry floors. When the discharge floor is determined to be a required re-entry floor using the above requirements, re-entry does not have to be provided back into the building on this level.	
Suggested Deadline Date:	28 Sep 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
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:	Document or certificate by appropriate authority for training on fire fighting, first aid, and rescue is not available.	
Source of Findings:	Document Review: No document regarding fire training has been found among the documents shown by factory personnel.	
Suggested Plan of Action:	Train and certify at least 25 percent of workers in fire fighting, first aid, and rescue by the proper authority.	
Suggested Deadline Date:	03 Dec 2014	
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:	2	
Description:	Workers are aware of the evacuation procedure upon commencing the alarm. However, no procedure defining evacuation process was available.	
Source of Findings:	Document Review: No proper record of developing and communicating any emergency evacuation plan has been found.	
Suggested Plan of Action:	Develop an emergency evacuation plan which includes duties and responsibilities of various people/groups, interfacing between groups and fire brigade, headcount and identification of trapped victims, physically disabled people and their rescue, etc. Look to the guidelines of BNBC in Appendix. The evacuation plan shall include provisions to assist physically disabled persons. A list of all employees with physical disabilities shall be kept by the Fire Service Director.	
Suggested Deadline Date:	30 Jul 2014	
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Question:	Training programs are implemented and documented in accordance with the Alliance Safety Training Curriculum.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No record of training program is available in accordance with the Alliance Safety Training Curriculum on fire safety.	



Source of Findings:	Document Review: Alliance safety training curriculum was not found among the documents shown by factory personnel.	
Suggested Plan of Action:	Impart training in accordance with Alliance Safety Training Curriculum and keep record with proper documentation.	
Suggested Deadline Date:	30 Jul 2014	
Standard:	Alliance Standards Part 13	
Question:	Fire Department pre-planning has been completed.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Fire department pre-planning was not found.	
Source of Findings:	Document Review: No document regarding fire department pre-planning has been found among the documents shown by factory personnel.	
Suggested Plan of Action:	Complete fire department pre-planning activities with the local Fire Service and Civil Defense.	
Suggested Deadline Date:	30 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:	2	
Description:	Hot-work was not going on in the factory. However, a hot-work permit program needs to be established.	
Source of Findings:	Document Review: Hot-work permit program was not found.	
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 process of request and approval by authorities, necessary checks prior to approval, standby fire watch and fire fighting equipment, sounding of alarm procedure, duration and expiry of permit and re-approval procedure, etc.	
Suggested Deadline Date:	03 Dec 2014	
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B	
Question:	Are all applicable permits up to date including Fire License & Boiler License.	
Priority Level:	Low	



Non-Compliance Level:	2
Description:	License for storage of Class-II petroleum greater than 1000 liter individually is not available. No acid license is available for storage. Factory has applied for diesel storage on 15/05/2014 and for acid license on 02/10/2011. Other license and permits were up-to-date.
Source of Findings:	Document Review: Some permits were not found.
Suggested Plan of Action:	Get all the required licenses and permits from the proper issuing authority.
Suggested Deadline Date:	30 Jul 2014
Standard:	Alliance Standard Part 13 Human Element Programs
Question:	A written housekeeping policy is established and enforced.
Priority Level:	Low
Non-Compliance Level:	1
Description:	A written housekeeping policy was not found.
Source of Findings:	Document Review: No document regarding a housekeeping policy has been found among the documents shown by factory personnel.
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:	15 Feb 2015
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping