

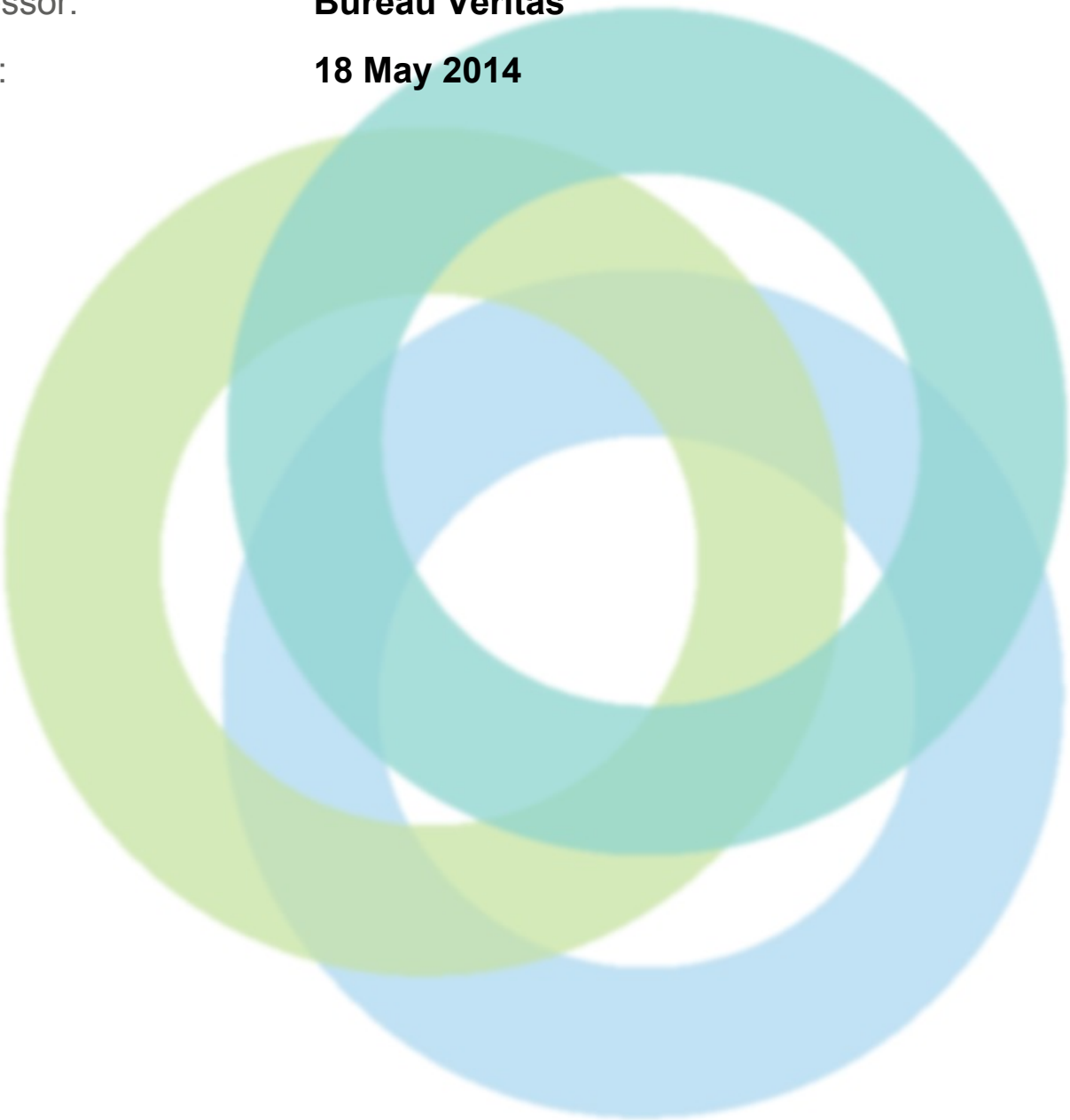
INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **THE CIVIL ENGINEERS LIMITED**

Address: **401/B Tejgaon Industrial Area Dhaka Dhaka 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.



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ALLIANCE
FOR BANGLADESH WORKER SAFETY

GENERAL INFORMATION

General Information

Factory Name:	THE CIVIL ENGINEERS LIMITED
Address:	401/B Tejgaon Industrial Area Dhaka Dhaka Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Dhaka
Zip Code:	1208
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	05-18-2014
Final Report Date:	06-19-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	There are 3 buildings in the factory premises out of which one is main production building and two are ancillary buildings. The buildings are named as: 1) Twelve story RCC main building: (Main Building consists of two buildings one building is 12 story and another is 8 story. These two buildings have separate approval but there is a construction joint between these two buildings and access between these two buildings is available. These two buildings are jointly known as TCEL [The Civil Engineers Ltd] Building), 2) Single story prefab Generator shed, 3) Single story prefab compressor & boiler shed.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	There are 3 buildings in the factory premises out of which one is main production building and two are ancillary buildings. The buildings are named as: 1) Twelve story RCC main building: (Main Building consists of two buildings one building is 12 story and another is 8 story. These two buildings have separate approval but there is a construction joint between these two buildings and access between these two buildings is available. These two buildings are jointly known as TCEL [The Civil Engineers Ltd] Building), 2) Single story prefab Generator shed, 3) Single story prefab compressor & boiler shed.
Approximate Building Area (SF):	Total area of buildings in the factory premises: 131470 sft. Building wise breakdown as follows: 1) Twelve story RCC main production building: 129150 sft (Basement: 5500 sft, Ground Floor: 12000 sft, 1st Floor: 12000 sft, 2nd Floor: 12000 sft, 3rd Floor: 12000 sft, 4th Floor: 12000 sft, 5th Floor: 12000 sft, 6th Floor: 12000 sft, 7th Floor: 12000 sft, 8th Floor: 5650 sft, 9th Floor: 5500 sft, 10th Floor: 5500 sft, 11th Floor: 5500 sft, Occupied roof: 5500 sft), 2) Single story prefab Generator shed: 1868 sft, 3) Single story prefab compressor & boiler shed: 452 sft.

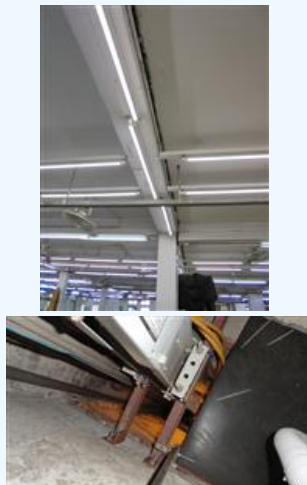


Date of Building Construction:	Factory personnel informed the date of building construction as follows: From ground floor to 8th floor finished in 1996, From 9th floor to 12th floor finished in 2005.
Date of Last Building Renovation/Addition:	Fire door installation work was going on at the time of assessment.
Ancillary Structures in Complex:	1) Single story prefab Generator shed, 2) Single story prefab compressor & boiler shed.
Approximate Ancillary Structures Area (SF):	1) Single story prefab Generator shed: 1868 sft, 2) Single story prefab compressor & boiler shed: 452 sft.
Number of Occupants:	Total number of occupants: 1635. 1) Twelve story RCC main production building: 1633 (Basement: 2, Ground floor: 7, 1st floor: 19, 2nd floor: 326, 3rd floor: 329, 4th floor: 326, 5th floor: 181, 6th floor: 315, 7th floor: 37, 8th floor: 24, 9th floor: 16, 10th floor: 29, 11th floor: 21, Occupied roof: 1), 2) Single story prefab Generator shed: 1, 3) Single story prefab Compressor & Boiler Shed: 1.
Number of Ancillary Levels (Stories):	1) Single story prefab Generator shed: Building height(Height of the highest occupied floor level): At grade [Height up to roof: 3.81 m or 12.50 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 2) Single story prefab compressor & boiler shed: Building height (Height of the highest occupied floor): at grade [Height up to roof: 3.81 m or 12.50 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1.
Occupancy Type:	1) Twelve story RCC main production building: [Basement: K1 (Fire pump), H2 (Store), Ground Floor: G2 (Embroidery), B2 (Child Care), H2 (Store), 1st Floor: F1 (Office), H2 (Finished goods store), D1 (Medical Room), 2nd Floor: H2 (Stationary and General Store), F1 (Office), G2 (Sewing), 3rd Floor: H2 (Store), F1 (Office), G2 (Sewing), 4th Floor: H2 (Store), F1 (Office), G2 (Sewing), 5th Floor: G2 (Final inspection & Poly section), F1 (Office), H2 (Store), 6th Floor: G2 (Sewing & Finishing), H2 (Store), F1 (Office), 7th Floor: G2 (Sweater Sample room), F1 (Office), E4 (Dinning), H2 (Store), 8th Floor: G2 (Sample Woven section), H2 (Store), J1 (Kitchen), 9th Floor: G2 (Cutting & Pattern), H2 (Store), 10th Floor: F1 (Office), 11th Floor: F1 (Office), Occupied roof: F1 (Office), E4 (Ablution area): 2. Shed-1: H2 (Wastage cloth store), K1 (Parking), 2) Single story prefab Generator shed: K1 (Generator), 3) Single story prefab Compressor & Boiler shed: K1 (Boiler & Compressor).
Construction Type:	Ground Floor to 12th Floor: Type 1 [with 01 non-rated prefab shed (partial) in 7th floor and 8th floor. Two building is adjoined in the complex, one is 12 storied and another is 8 storied] 2) Single story prefab Generator shed: Non-rated, 3) Single story prefab Compressor & Boiler shed: Non-rated.
Height of Highest Occupied Floor Level Above Grade:	1) Twelve story RCC main production building: 38.94 m or 127.75 ft, 2) Single story prefab Generator shed: At finished grade, 3) Single story prefab Compressor & Boiler shade: At finished grade.



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:	There are non-rated openings with the production area through partition walls in every store and also the dining area on the 7th floor has an opening through the rated wall separated to the production area.	
Source of Findings:	Visual Assessment: Unprotected openings were found at different locations.	
Suggested Plan of Action:	Close all windows and other openings on all the fire rated wall across the entire premises, or protect the penetrations of fire resistive rated assemblies with a listed through penetration fire-stop system tested in accordance with ASTM E814.	
Suggested Deadline Date:	09 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:	3	
Description:	There are cracks at construction joints and dampness on ceilings at some locations of main building. There is an electrical chase that is not protected. Thus, the floors are not separated with fire rated construction barriers.	
Source of Findings:	Photograph: (1) Floor separations are not fire protected. (2) Electrical floor penetration	
Suggested Plan of Action:	Provide fire-resistive rated construction barriers between floors following Table 4.4.1 of Alliance Standard. Consult a qualified fire protection engineer to design the rated construction barriers.	
Suggested Deadline Date:	09 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:	3
Description:	Exit enclosures of west side have non-rated openings with production and office (the opening is covered by glass which is not fire rated) and no fire door is installed. The walls of other staircases have required rating but the exit doors leading to staircases are not fire doors on all the floors. However, fire rated door installation work is ongoing (22 fire doors were found completed during audit). Aluminum sliding doors and collapsible doors are installed at some exits.
Source of Findings:	Visual Assessment: Exit enclosures are not fire protected at different locations.
Suggested Plan of Action:	Provide 2 hr fire-resistive rated construction barriers at exit enclosures. Fit outward opening, side-swinging, self-closing, non-lockable fire doors of 1.5 hr rating in all stairwell enclosures. Consult a qualified fire protection engineer to design the required rated construction barriers.
Suggested Deadline Date:	09 Sep 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:	3
Description:	There is a cargo elevator and a passenger elevator in the main building. The elevators are open to production floor and the doors of elevator shafts are not fire rated as required in accordance with Alliance Standards.
Source of Findings:	Visual Assessment: Shafts found in the main building were unprotected.
Suggested Plan of Action:	Provide a shaft enclosure of required rating by constructing the enclosure with rated material of required thickness. Protect the openings of shaft enclosure by providing rated opening protectives.
Suggested Deadline Date:	09 Sep 2014
Standard:	Reference Alliance Standards Part 4 Section 4.5.7.1 through 4.5.7.3
Question:	Is the fire resistance materials of structural members in good condition and free of damage?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	The prefab shed and masonry construction with tin roof on 7th floor (partial) are non-rated constructions. There are cracks at construction joints and





	dampness on the ceiling at some locations of the main building, which is not allowed as per Alliance Standards.
Source of Findings:	Visual Assessment: Dampness and cracks at construction joints were found in the structural members of the buildings.
Suggested Plan of Action:	Consult a structure expert to assess the condition of the structure. Repair the crack and leakage of the slab, column and beam following instructions of the expert.
Suggested Deadline Date:	02 Dec 2014
Standard:	BNBC Part 3 Chapter 3
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 in various floors (i.e. in front of lift) and not maintaining the dimensions requirement for miscellaneous store (area 250 sft, height 8 ft, separation from adjacent area 10 ft) as per the Alliance Standards. The production area and dining area on 7th floor are not separated by fire-resistive rated construction barriers. Production work is taking place in the dining area. On the first floor, finished goods store is separated from office and production by non-rated partition and almost all stores are not separated by rated separations.
Source of Findings:	Visual Assessment: Occupancy separations between hazards are required at different locations in the main building.
Suggested Plan of Action:	Keep the in-process goods in floors maintaining a maximum area of storage 250 sft, height 8 ft, separation from adjacent area 10 ft. Remove any type of production from dining and provide fire-resistive rated construction barriers between hazard types following Table 4.4.1 of Alliance Standard. Consult a qualified fire protection engineer to design the required rated construction barriers.
Suggested Deadline Date:	02 Dec 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:	3
Description:	No occupancy certificate is available for any building in the factory premises.
Source of Findings:	Document Review: There was no occupancy certificate for any of the buildings among the documents shown by the factory concerned people.





Suggested Plan of Action:	Apply to Rajuk for issuance of occupancy certificate and pursue the matter to expedite.
Suggested Deadline Date:	29 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:	3
Description:	Height of the highest occupied level of the main building is 38.94 m (127.75 ft). The whole building needs to be protected by automatic sprinkler system. But sprinkler system is not installed in the building. Automatic sprinkler systems are to be provided throughout the buildings with an occupied floor greater than 23 m (75 ft) above the finished grade in accordance with NFPA requirements.
Source of Findings:	Visual Assessment: The height of the highest occupied level of the main building is 38.94m (127.75ft). Therefore, an automatic sprinkler system is required.
Suggested Plan of Action:	Install an automatic sprinkler system throughout the building designed by a qualified fire protection engineer. The hydraulic design of the sprinkler system has to be pre-approved by CoE of Alliance. All installation and design requirements outlined in BNBC Part 4 Chapter 4 shall be replaced by the requirements of NFPA 13. Pipe schedules shall not be used to size pipe. All systems shall be hydraulically calculated to meet the required NFPA design requirements. Installation of new automatic sprinkler systems shall be required to provide shop drawings and hydraulic calculations as outlined in NFPA requirements. The test and performance report of the installed system must be submitted to the Alliance for review. Final inspection and testing shall be witnessed by the Alliance.
Suggested Deadline Date:	24 Feb 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:	Does the building have a Standpipe System?
Priority Level:	High
Non-Compliance Level:	3
Description:	The height of the highest occupied floor of the main building is 38.94 m (127.75 ft) above grade. Therefore class-I type standpipe systems with automatic sprinkler systems need to be installed throughout the main building as per the Alliance Standard. One class-II standpipe hose connection (40 mm) is installed on each floor. There is no class-I standpipe hose connection (65 mm) in required stairs including occupied roof. Diameter of riser pipe is 3





	inches, which is not sufficient.
Source of Findings:	Visual Assessment: No class-I standpipe hose connection is installed in stairwell.
Suggested Plan of Action:	Install a NFPA-compliant standpipe system at required locations designed by a qualified fire protection engineer. All standpipe system installations and hydraulic calculations shall be reviewed by the Alliance prior to commencement of installation. System design should also account for the two additional stories currently under construction. Testing of the installation shall be conducted in accordance with NFPA 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.
Suggested Deadline Date:	09 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:	3
Description:	Fire pump is available; however it does not comply with the requirements of Alliance Standards. Hydraulic calculation for installed standpipe is also not available.
Source of Findings:	Visual Assessment: Fire pump is available in the factory premises but it is not in accordance with NFPA requirements.
Suggested Plan of Action:	Install a NFPA-compliant pump dedicated for fire protection. 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. Acceptance testing of the installation shall be in accordance with NFPA testing requirements. Documentation of all testing shall be submitted to the Alliance for review prior to final acceptance.
Suggested Deadline Date:	02 Dec 2014
Standard:	Alliance Standard Part 5 Fire Protection Systems
Question:	Are notification and initiation devices for the fire alarm system installed at required locations based on occupancy type?
Priority Level:	High
Non-Compliance Level:	3
Description:	There is a fire detection and alarm system in the building. The system is activated by smoke detectors throughout the facility as well as push buttons located at the exit stairs. Smoke detectors are insufficient in number from ground floor to sixth floor. The alarm system is designed for general evacuation, alerting all occupants at the same time through horns. The fire





	alarm system is powered by an uninterruptable power supply (UPS/battery system).
Source of Findings:	Visual Assessment: Smoke detectors were found insufficient in numbers from ground floor to 6th floor.
Suggested Plan of Action:	Initiating devices shall include either smoke or fire detection devices spaced in accordance with NFPA 72. When complete sprinkler protection is provided throughout a floor with water flow devices designed to initiate the alarm notification, smoke and fire detection devices can be eliminated throughout that floor as per the Alliance Standard.
Suggested Deadline Date:	09 Sep 2014
Standard:	Pull stations at egress points, smoke detectors in air handling equipment, visual and audible devices spaced appropriately based on occupancy type. Reference NFPA 72
Question:	Are fire department connections provided and clearly identified for the Fire Protection Systems?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Fire department (Siamese) inlet connection is provided but this is obstructed by a small shed and a tree. The outlet connection is not provided.
Source of Findings:	Visual Assessment: Fire department inlet connection was found obstructed.
Suggested Plan of Action:	Clear the surroundings of inlet connection. Provide fire department outlet connections to allow fire department pumper vehicles to draw water from ground-level or underground water storage tanks. Connections shall match the Fire Service and Civil Defense hose thread standard.
Suggested Deadline Date:	02 Dec 2014
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 in every month but not in accordance with NFPA requirements.
Source of Findings:	Document Review: Relevant documents are not compliant with NFPA 10.
Suggested Plan of Action:	Fire extinguishers are to be inspected, tested, and maintained in accordance with NFPA requirements.
Suggested Deadline	02 Dec 2014





Date:		
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:	A centralized alarm and detection system is available. Detection system is monitored centrally from security station but not connected to fire service and civil defense. Currently there is no monitoring company in Bangladesh and fire service and civil defense are not capable of monitoring fire alarm and detection systems of the factories.	
Source of Findings:	Visual Assessment: No central station for monitoring service was found.	
Suggested Plan of Action:	Arrange for direct connection of the fire alarm system to Fire Service and Civil Defense as per the Alliance Standard. Until that time that monitoring can be set up, 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:	15 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:	There is no test or maintenance plan or record for the installed standpipe system as per NFPA 25.	
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:	Install a class-I type standpipe system at required locations designed by a qualified fire protection engineer and establish required inspection, maintenance, and testing program for the standpipe and hose system.	
Suggested Deadline Date:	02 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?	

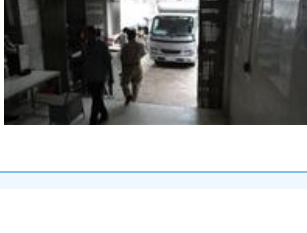


Priority Level:	Low	
Non-Compliance Level:	2	
Description:	A class I standpipe system is not installed in the building. Signage for the available class II standpipe system is not installed.	
Source of Findings:	Visual Assessment: Signage for the standpipe system was not found.	
Suggested Plan of Action:	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. Install required identification signs at the noted locations.	
Suggested Deadline Date:	29 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 procedure of fire pump was found in 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:	02 Dec 2014	
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps	
Means of Egress		



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:	3	
Description:	The aisles on 5th floor are partially blocked by columns and on 1st floor the path of egress is reduced by new constructed brick wall. This violates Alliance Standard Part 6 Section 6.5.1 and 6.5.2.	
Source of Findings:	Visual Assessment: Path of egress was found reduced.	
Suggested Plan of Action:	Remove aisle marking and mark aisles again so that these are not blocked by any permanent element like column.	
Suggested Deadline Date:	09 Sep 2014	
Standard:	Alliance Standard Part 6 Section 6.5 Egress Width and BNBC Table 4.3.2	
Question:	Exit discharge is directly to the exterior of the building, unless the requirements of 6.17.2 are met, at grade or provides direct access to grade. Exit discharge shall not reenter a building.	 
Priority Level:	High	
Non-Compliance Level:	3	
Description:	On the ground floor, there are 4 exits. Among them, one exit discharge is directly to exterior of building. The other three pass to the exit through a non-rated corridor.	
Source of Findings:	Visual Assessment: Exit discharges were not directly exterior to the building.	
Suggested Plan of Action:	Provide a rated exit passageway (a protected path of egress) from the exit enclosure to the public way. The rating of the exit passageway is to be equal to fire rating requirement of the exit that is being served and shall not be less than 1 hr fire-resistance rated.	
Suggested Deadline Date:	09 Sep 2014	
Standard:	Alliance Standard Part 6 Section 6.17 Exit Discharge. See Section 16.7.2 and 16.7.3 for exceptions.	



Question:	Exit access corridors serving an occupant load exceeding 30 are separated by walls having a fire-resistance rating of 1 hr.	 
Priority Level:	High	
Non-Compliance Level:	3	
Description:	Corridor on 1st floor serving finished goods store and office is not protected by 1 hour fire-resistant construction. On ground floor, exit access corridor has a non-rated partition and glass sliding partition with aluminum, which is not 1 hour fire rated as required.	
Source of Findings:	Visual Assessment: Exit access corridors were found unprotected.	
Suggested Plan of Action:	Provide fire-resistive rated assemblies at the required exit access corridors. The rated assembly should be approved and/or designed by a qualified fire protection engineer. Exit access corridors serving an occupant load exceeding 30 are to be separated by walls having a fire resistance rating of 1 hr unless provided with automatic sprinkler protection throughout the story or building. Window and glass block assemblies are to be tested for fire rating following NFPA 257.	
Suggested Deadline Date:	09 Sep 2014	   
Standard:	Alliance Standard Part 6 Section 6.3 and Part 4 Section 4.5. Does not apply if an automatic sprinkler system is installed throughout the building.	
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 doors and locking arrangements like hasps, locks, slide bolts at the exit doors, which violates the Alliance Standard. Doors are not locked.	
Source of Findings:	Photograph: (1) East exit locking arrangement (2) Collapsible door at west exit (3) Northwest stair with gates (4) Northwest stair discharge with gates, Visual Assessment: Locking devices were found at exit doors.	
Suggested Plan of Action:	Remove all hasps, locks, slide bolts, or 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. Turning a door handle and disengaging a lock is considered two motions. Doors may be provided with locking hardware from the ingress side provided that a panic bar is installed on any door with an occupant load exceeding 49 persons. Re-entry provisions must be met.	
Suggested Deadline Date:	01 Jul 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	



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:	Out of 4 exit doors, 3 have widths of more than 0.8 m, but the width of the door at the east side is only 0.75 m. All exits are not fitted with fire doors, but fire door installation is ongoing and already 22 fire doors have been installed.	
Source of Findings:	Visual Assessment: Door width was found less than 0.8 m and all the exits are not fitted with fire doors.	
Suggested Plan of Action:	Increase door width to 0.8 m or greater by demolishing wall adjacent to the door. Provide 1 hr fire protective opening assemblies in 1 hr rated exit enclosures. 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. Exits shall be enclosed with the same fire-resistance rating as the floor penetrated but will not need to exceed 2 hr.	
Suggested Deadline Date:	09 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:	Stairs have a minimum width of 0.9 m (35 in.).	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	Stair width of east side is 0.75 m (30 inches), which does not meet the Alliance requirement for minimum width of (0.90 m).	
Source of Findings:	Visual Assessment: Stair width was found less than required.	
Suggested Plan of Action:	Increase stair width to minimum 0.9 m. Alternatively, close this stair and provide an alternate stair to fulfill the requirement for width and maximum travel distance.	
Suggested Deadline Date:	09 Sep 2014	
Standard:	Alliance Standard Part 6 Section 6.5 Egress Width. Applies to existing construction.	



Question:	Landings are provided on both sides of doors used along the path of egress. Doors do not swing out over stairs.
Priority Level:	High
Non-Compliance Level:	3
Description:	On 6th floor, landings are not provided on the egress side of the doors used in the means of egress. This violates the Alliance Standards.
Source of Findings:	Visual Assessment: Landings are not provided on the egress side of exits.
Suggested Plan of Action:	Replace the doors from their existing positions toward inside the floor so that door does not swing out over stair.
Suggested Deadline Date:	09 Sep 2014
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates
Question:	Interior exit stairways and ramps terminate at an exit discharge except where terminating at a rated exit passageway.
Priority Level:	High
Non-Compliance Level:	3
Description:	Interior exit stairway from east side stair terminates at a non-rated exit passageway, which violates the Alliance Standard. Some combustibles are stacked in the exit passageway, which is also a violation.
Source of Findings:	Visual Assessment: Interior exit stairway terminates at a non-rated exit passageway.
Suggested Plan of Action:	Provide protective opening assemblies of required rating as per the Alliance Standard. Remove the combustibles and use the exit passageway only as an extension of the stair.
Suggested Deadline Date:	09 Sep 2014
Standard:	Alliance Standard Part 6 Section 6.14 Exit Enclosures
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:	The aisles on the 5th floor are partially blocked by columns and on the 1st floor the path of egress is reduced by a newly constructed brick wall. This violates Alliance Standards.
Source of Findings:	Visual Assessment: Some aisles were found blocked.





Suggested Plan of Action:	Remove existing aisle markings and draw new markings to fulfill the minimum aisle width requirement. Relocate the machines accordingly if necessary.	 
Suggested Deadline Date:	09 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:	All doors in a means of egress are of the side-hinged swinging type.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	The factory already installed 22 fire rated doors and more installation work is ongoing, but some of the doors in the means of egress are collapsible gates and some are glass swinging type doors.	
Source of Findings:	Photograph: (1) Westside gate (2) Sliding gate on northeast stair at floors 2-7, Visual Assessment: Some collapsible gates were found at exits.	
Suggested Plan of Action:	Replace all collapsible, sliding, roll-down gates and shutters in means of egress with side-hinged swinging type doors of proper width and rating.	
Suggested Deadline Date:	09 Sep 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:	3	
Description:	All paths of egress are not provided with compliant means of illumination. Exit doors are have 10 lux of illumination, but all aisles are not provided with the required means of illumination where aisles change direction.	
Source of Findings:	Visual Assessment: All paths of egress were not provided with compliant means of illumination.	
Suggested Plan of Action:	Install appropriate means of illumination at the noted locations. 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:	02 Dec 2014	
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:	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:	3
Description:	Handrails were found on only one side of the stairs, which is a violation of the Alliance Standards.
Source of Findings:	Visual Assessment: Handrails were found on only one side of stairs.
Suggested Plan of Action:	Provide handrails on both sides of every stairway. Provide intermediate handrail when the stair width exceeds 2.2 m (87 in.). Provide handrails of height between the range 865 mm (34 in.) and 965 mm (38 in.).
Suggested Deadline Date:	02 Dec 2014
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards
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:	3
Description:	The production building has a basement and 12 stories, but doors are not provided with re-entry. Stair doors with re-entry are required on 11th, 6th and 1st floors in according with Alliance Standards.
Source of Findings:	Visual Assessment: No re-entry door was found in main building.
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 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:	09 Sep 2014
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates
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:	2
Description:	Occupant loads are not posted in any assembly or production floor as required.
Source of Findings:	Visual Assessment: No occupant loads were found posted.
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:	15 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:	Record of verifying emergency power for means of egress illumination was not found as required.
Source of Findings:	Document Review: No document regarding verification of emergency power for means of egress was found among the documents shown by the factory personnel.
Suggested Plan of Action:	Develop a testing and maintenance program that ensures the operation of all exist 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 min once per year
Suggested Deadline Date:	15 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 along the path of egress additional exit signs or directional signs are not provided where there is a change in direction and where the continuation of egress is not obvious. This condition fails to satisfy Alliance Standard requirements.
Source of Findings:	Visual Assessment: Directional signs are not provided where there is a change



	in direction and where the continuation of egress is not obvious.
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:	02 Dec 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 test of the emergency battery backup for illumination of exit signs was found as required.
Source of Findings:	Document Review: No document regarding testing of emergency power for exit signs was found among the documents shown by the factory personnel.
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 signs must be tested on a monthly basis. Functional testing of battery powered signs must be provided for a minimum 90 min once per year.
Suggested Deadline Date:	15 Jul 2014
Standard:	Alliance Standard Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape.
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 is posted only in west side stair but stair name or designation is not mentioned. Floor level is not mentioned in Bengali. Other stairs don't have any signage.
Source of Findings:	Visual Assessment: Stair designation sign was not found.
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:	15 Jul 2014



Standard: Alliance Standard Part 6 Section 6.9 Stairs

Fire Safety Programs

Question: Are the required number of people trained and certified in fire fighting, first aid, and rescue training by the appropriate authority.

Priority Level: High

Non-Compliance Level: 2

Description: Factory record shows that more than 30 workers were trained by Bangladesh Fire Service and Civil Defense authority and certificates were available.

Source of Findings: Document Review: Only 30 people were found trained and certified according to the documents shown by the factory concerned person.

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: 02 Dec 2014

Standard: Alliance Standard Part 13 Human Element Programs

Question: Are there additional areas of non-compliance to report?

Priority Level: Medium

Non-Compliance Level: 3

Description: There is a kitchen shed (corrugated iron sheet shed) on 8th floor rooftop. Half of the roof is non-rated and the remaining part is made of RCC slab where the kitchen shed is located.

Source of Findings: Visual Assessment: Unprotected kitchen shed was found on 8th floor rooftop.

Suggested Plan of Action: Remove the kitchen from roof top, or remove the gas burner.

Suggested Deadline Date: 19 Jul 2014

Standard: Not Applicable

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 of the alarm. However, no procedure defining evacuation process was available.

Source of Findings: Visual Assessment: No procedure defining evacuation process was 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. and all components required by the Alliance Standards and communicate the plan to all employees.	
Suggested Deadline Date:	15 Jul 2014	
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Question:	Emergency egress maps are posted at the entrance to each exit stair or main point of egress.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Emergency egress maps were found posted only in a few locations.	
Source of Findings:	Visual Assessment: Emergency egress maps were posted only in few locations.	
Suggested Plan of Action:	Post emergency egress maps or fire evacuation maps at the entrance to every exit stair or main point of egress.	
Suggested Deadline Date:	15 Jul 2014	
Standard:	Alliance Standards Part 13 Section 13.4 Evacuation Plan	
Question:	Storage areas underneath the cutting tables are clear of combustibles.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Fabrics were stored underneath the cutting tables of cutting section.	
Source of Findings:	Visual Assessment: Fabrics were stored underneath the cutting tables.	
Suggested Plan of Action:	Remove all combustibles stored underneath the cutting tables at the noted locations.	
Suggested Deadline Date:	18 Jul 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:	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:	15 Jul 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:	A written housekeeping policy was not found, which is required as per Alliance Standards.
Source of Findings:	Document Review: No document regarding housekeeping policy was 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 m ² (500 ft ²). Limit dense deposits to 6 mm (¼ in.) and oil saturated deposits to 3.2 mm (⅛ in.).
Suggested Deadline Date:	24 Feb 2015
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping
Question:	A hot-work permit program has been established.
Priority Level:	Low
Non-Compliance Level:	2
Description:	A hot-work permit program is not established. It is required as per Alliance Standards. However, hot-work is not going on in the factory right now.
Source of Findings:	Document Review: No documentation of a hot-work permit program was presented by the factory personnel.
Suggested Plan of Action:	Develop a NFPA-compliant hot-work permit program. In general, this program should address the process of request and approval of 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:	02 Dec 2014	
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B	
Question:	Smoking is only allowed at designated areas.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Smoking is prohibited as per verbal information of factory personnel, but signs are not posted in Bengali and English at all building entrances. No designated smoking area is created outside the buildings.	
Source of Findings:	Visual Assessment: No sign posted in Bengali and English was found.	
Suggested Plan of Action:	Post smoking prohibited signs in Bengali & English. Smoking shall be prohibited in any garment factory building, separate storage building, or any building or area where the Inspector of the Factories Rules requires that smoking be prohibited. If an owner creates a designated smoking area outside the buildings, information on the location of these designated areas shall be posted on the signs.	
Suggested Deadline Date:	01 Jul 2014	
Standard:	Alliance Standards Part 13 Section 13.5 Smoking	
Question:	Are all applicable permits up to date including Fire License & Boiler License.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Photocopy of trade license, industry license, fire license, boiler license, etc. are available except the BERC License. Company applied for 520 KW license but there are three generators of 520 KW, 576 KW and 80 KW.	
Source of Findings:	Document Review: A BERC license was not available but all other available documents are up to date.	
Suggested Plan of Action:	Obtain or update all the licenses and permits required from the proper issuing authority. Apply to BERC for license for all three generators.	
Suggested Deadline Date:	15 Jul 2014	
Standard:	Alliance Standard Part 13 Human Element Programs	