INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name:	**Sterling Laundry Ltd.**
Address:	**Dania, Nayarhat, Ashulia, Savar Ashulia, Savar Dhaka Bangladesh**
Assessor:	**Emkay Enterprises LTD**
Date:	**15 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:	Sterling Laundry Ltd.
Address:	Dania, Nayarhat, Ashulia, Savar Ashulia, Savar Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Ashulia, Savar
Zip Code:	1350
Audit Duration:	1 Days 0 Hours
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	27 March 2014
Final Report Date:	02 March 2015
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	Main Building: 1; Ancillary Structures: 3.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	Main Building: B+8
Approximate Building Area (SF):	220,540 (28,000 sq. ft. floor prints)
Date of Building Construction:	2005-2006
Date of Last Building Renovation/Addition:	2008-2011
Ancillary Structures in Complex:	3
Approximate Ancillary Structures Area (SF):	14,160 (Without Ancillary Buildings); 3,000 Utility Building
Number of Occupants:	4,810

Number of Ancillary Levels (Stories):	Ancillary Buildings: 01. Utility Building: 3 stories (B+G+2); 02. Security Building: 2 stories (G+1); 03. ETP (Effluent Treatment Plant): 2 stories (G+1).
Occupancy Type:	As per running operation of RMG factory, Garment factory & laundry. Occupancy Type-G2
Construction Type:	Main Building: Type-1 (RCC frame) from basement up to 6th floor and non rated (prefabricated shed on roof deck) for 7th floor. Ancillary-1 : Type-1 Ancillary-2 : Type-1 Ancillary-3 : Type-1
Height of Highest Occupied Floor Level Above Grade:	Main Building: The total height of the building above grade was 31.25 m (102.5 ft) and the height of highest occupiable floor level (from grade level to roof deck) was 26.98 m (88.5 ft); Utility: 9.2 m (30 ft)

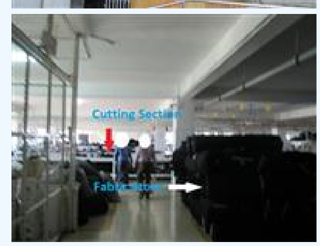
ASSESSMENT FINDINGS

Fire Protection Construction

Question:	Are openings and penetrations through rated walls and/or assemblies protected?
Priority Level:	High
Non-Compliance Level:	3
Description:	Openings through rated walls were not protected with fire rated door. Wall penetration were found at 4th floor and floor penetration was found at 6th floor without fire protection during assessment. Opening through wall was found at workshop room (Basement).
Source of Findings:	Photograph: Door opening, Wall penetration, Floor penetration,
Suggested Plan of Action:	Provide fire-resistive rated opening and penetration protection for rated walls and assemblies in accordance with Alliance Standard Sections 4.6 and 4.7. Consult a qualified fire protection engineer to design the required rated opening protection or penetration systems.
Suggested Deadline Date:	28 Jul 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:	Typical slab thickness was 125 mm and floor penetrations were found around the electric conduit at 6th floor.
Source of Findings:	Photograph: Floor penetration
Suggested Plan of Action:	Seal the penetrations around conduits by proper fire rated sealing materials in accordance with Alliance Standard Sections 4.7. Consult a qualified fire protection engineer.
Suggested Deadline	28 Jul 2014

Date:		
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:	The main building was B+8 storied but walls of stairwell were 5" masonry brick wall and collapsible gates were installed in most of the exits leading to the stairwell. Exits for the Utility Building (3 stories) were not enclosed with rated construction based on the number of connecting stories.	
Source of Findings:	Photograph: Collapsible gate; No exit Enclosure at utility building	
Suggested Plan of Action:	Provide 2-hour fire-resistive rated construction barriers at exit enclosures with 1.5-hour fire-rated opening protection (Door, window etc.) for main building. Provide 1-hour fire-resistive rated construction barriers at exit enclosures with 0.75-hour fire-rated opening protection (Door, window etc.) for utility building. The new fire rated door will side-hinging swinging outward opening type, with auto closure and panic bar and without locking arrangement. Minimum width of new fire rated door will be 1.00 m. Doors need to be free from general locking arrangements. Consult a qualified fire protection engineer to design the required rated construction barriers with opening protection.	
Suggested Deadline Date:	28 Jul 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:	Elevator shaft was open at each floor of Main Building (8 stories).	
Source of Findings:	Photograph: Shaft	
Suggested Plan of Action:	Provide minimum 2-hour fire-resistive rated continuous barriers at shaft enclosures with 1.5-hour fire-resistive opening protection at shaft opening(s). Consult a qualified fire protection engineer to design the required rated construction of shaft.	
Suggested Deadline Date:	28 Jul 2014	
Standard:	Reference Alliance Standards Part 4 Section 4.5.7.1 through 4.5.7.3	

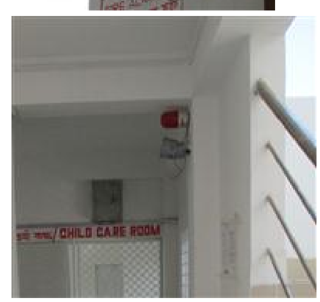
Question:	Is the fire resistance materials of structural members in good condition and free of damage?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	RCC frame building (Basement to 6th floor) and 7th floor was prefabricated shed. From visual inspection all those structural members (Basement to 6th floor) were found free of damage during assessment. 7th floor was non-rated shed construction which is not allowed in a high-rise building.	
Source of Findings:	Photograph: Non-rated structure on roof deck.	
Suggested Plan of Action:	Replace shed construction on 7th floor with fire resistance rated construction in accordance with Alliance Standard Section 3.6.2 or remove the non-rated structure.	
Suggested Deadline Date:	28 Jul 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:	2	
Description:	Generator room was not separated from boiler room at utility building. Also, opening of utility building to main production building was not fire protected. Generator of basement floor was exposed in the egress path. Fabric storage area was not separated from cutting section at 4th floor of main production building.	
Source of Findings:	Photograph: Generator & Boiler, Fabric store, Generator at basement	
Suggested Plan of Action:	Provide fire-resistive rated construction barriers between hazard types in accordance with Alliance Standard Sections 3.4 and 4.5. Rooms used for housing of combustible materials, boiler need to be separated from the surrounding occupancy with a minimum 1-hour fire rated construction with 0.75-hour fire rated opening protection. Room used for housing of generator need to be separated from the surrounding occupancy with a minimum 2-hour fire rated construction with 1.5-hour fire rated opening protection. Consult a qualified fire protection engineer to design the required rated construction barrier.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Certificates of Occupancy for each building have been issued and are on file.	
Priority Level:	Low	

Non-Compliance Level:	1
Description:	No occupancy certificate was available during assessment.
Source of Findings:	Document Review: By checking documents it was found that factory doesn't have any occupancy certificate.
Suggested Plan of Action:	Apply to RAJUK in an expeditious manner for issuance of the Certificates of Occupancy for each building and ancillary structure according to building use.
Suggested Deadline Date:	16 Jun 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:	Not in compliance as per Alliance Standards Part 5 Section 5.3 Automatic Sprinkler Systems. The height of occupiable floor level (from grade level to roof deck) was 26.98m (88.5 ft.) in main production building. Automatic sprinkler system was not installed in main production building.
Source of Findings:	Visual Assessment: Automatic sprinkler system was not found during this assessment.
Suggested Plan of Action:	Install an automatic sprinkler system throughout the building designed by a qualified fire protection engineer. All sprinkler installations shall be submitted for review by the Alliance prior to commencement of installation.
Suggested Deadline Date:	12 Jan 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:	Non class stand pipes (25 mm diameter) were located in the Stair. No Class-I (65 mm diameter) & Class-II (40 mm diameter) were found in the factory building. Minimum pressure of 65 psi was not tested during the audit. Further evaluation is required by the owner. Three hose stations are provided for each level. These are supplied from a 12,000 liter tank on the roof. This tank is refilled from a 120,000 liter tank underground supplied by a deep well.
Source of Findings:	Photograph: Non class standpipe

Suggested Plan of Action:	Modify or install a standpipe System to meet the requirements of Alliance Standard. Standpipe system must comply with NFPA 14. Consult a qualified fire protection engineer before modify or installing a new system.	
Suggested Deadline Date:	28 Jul 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:	No fire pump was installed at this factory	
Source of Findings:	Visual Assessment: No fire pump has been found during this assessment.	
Suggested Plan of Action:	Provide a dedicated fire pump in accordance with NFPA 20 to supply the demands of the connected fire protection systems along with a stored source of water sufficient to meet the demands per NFPA 22.	
Suggested Deadline Date:	28 Jul 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 manual fire alarm system in the building. Push buttons are located at the entrances into the stairs. The alarm system is interconnected and will notify all floors through installed horns. No centralized smoke detection system was installed. Only single station battery powered smoke alarms are installed. There are very few visual devices installed in every floor.	
Source of Findings:	Photograph: Pull station & audible device, Visual Device	
Suggested Plan of Action:	Install initiating devices and notification appliances as required by the Alliance Standard and NFPA 72. Devices should be part of an automatic fire alarm and detection system for the facility. All fire alarm installations shall be submitted for review by the Alliance prior to commencement of installation.	
Suggested Deadline Date:	28 Jul 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	

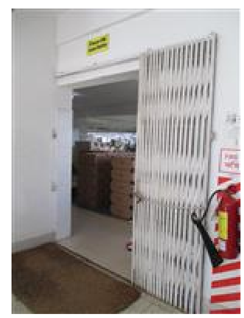
Question:	Are fire department connections provided and clearly identified for the Fire Protection Systems?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	No fire department connections were provided.
Source of Findings:	Visual Assessment: No fire department connection has been found during this assessment.
Suggested Plan of Action:	Provide Fire Department (Siamese) connections in accordance with Alliance Standard Section 5.5.4. Connections shall match the Fire Service and Civil Defence hose thread standard.
Suggested Deadline Date:	20 Oct 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:	There were maintenance checklists with each extinguisher that were checked 3 times per month without a proper checklist covering all the issues outlined in NFPA 10. While interviewing the person responsible for this it has been found that only pressure gauge (where available) and expiration dates were checked.
Source of Findings:	Photograph: Maintenance of extinguisher
Suggested Plan of Action:	Establish an inspection, testing, and maintenance program for all fire extinguishers. Program must comply with the requirements of NFPA 10
Suggested Deadline Date:	20 Oct 2014
Standard:	NFPA 10 Chapter 7

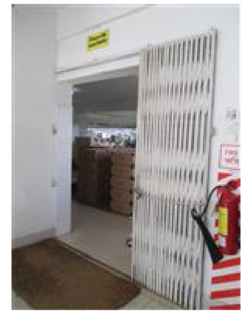
Question:	Is the fire alarm and detection system monitored by a central station monitoring service or directly connected to the Fire Service and Civil Defense?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Not in Compliance as per Alliance Standard Part 5 Section 5.7.5 Monitoring. No centralized detection system was available. Only standalone smoke detectors are available at each floor in few location. Manual fire alarms were installed with push calling point.
Source of Findings:	Photograph: Standalone smoke detector

Suggested Plan of Action:	Install a new automatic fire alarm and detection system. Once installed, arrange for direct connection of the fire alarm and detection system to a central station monitoring service or the Fire Service and Civil Defence as per Alliance Standard Part 5 Section 5.7.5 Monitoring. Until that time that a central station monitoring service or direct connection to the Fire Service and Civil Defence can be set up, a person trained to contact the Fire Service and Civil Defence in the event of fire alarm activation shall be provided. An annunciator shall be located in a constantly attended location (such as a fire control room) to alert this person.	
Suggested Deadline Date:	02 Jun 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:	1	
Description:	Only the inspection tags of hose system were provided. However, inspection, maintenance, and testing plan and records of the standpipe and hose systems were not provided during visit as per NFPA 25.	
Source of Findings:	Photograph: Hose maintenance	
Suggested Plan of Action:	Establish an inspection, testing, and maintenance program for the standpipe system. Program must comply with NFPA 25.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Reference NFPA 25 Chapter 6 Standpipe and Hose Systems Table 6.1.1.2	
Means of Egress		
Question:	Exit discharge is directly to the exterior of the building, unless the requirements of 6.17.2 are met, at grade or provides direct access to grade. Exit discharge shall not reenter a building.	
Priority Level:	High	
Non-Compliance Level:	3	

Description:	North-East corner stair discharged to the exterior of the building then back in to the building to the basement. Unprotected workshop room, generator were present in the basement near the egress path. Also chemical containers and fuel drums were present in this egress path. The Back stair discharges outside to the alley that goes under the building. Sterling plans to create a gate through the back property wall to create a new egress path for this discharge.	
Source of Findings:	Photograph: NE corner stair discharge; Workshop room, generator, chemical container & fuel drum in egress path; Back stair discharges outside to the alley the goes under the building	
Suggested Plan of Action:	Interior exit stairways shall terminate at an exit discharge or outside the building except where terminating at an exit passageway that is constructed to meet the same rating requirement as the exit that is being served. Exits are not allowed to leave the building and then re-enter the building prior to reaching the exit discharge without maintaining the rating of the exit enclosure. The exit passageway of North-East corner stair is required to be 2 hour fire resistance rated construction. 2 hour fire resistance rated construction is required to separate generator room from exit passageway. Chemical container and fuel drums need to be removed from exit passageway. Consult a qualified fire protection engineer to design the required rated egress passageway. Create a gate through the back property wall so that egress is not under the building or exposed to the buildings.	
Suggested Deadline Date:	28 Jul 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:	Not in compliance as per Alliance Standard Part 6 Section 6.3.1.1. Walls were protected (5“ brick wall) but openings were not protected (Exit excess corridor leads to the exterior of the building through basement.)	
Source of Findings:	Photograph: Exit access corridor	
Suggested Plan of Action:	Exit access corridors serving an occupant load exceeding 30 shall be separated by walls having a fire resistance rating of 1-hour and with 0.75-hour opening protection or provided with automatic sprinkler protection throughout the story or building as per NFPA 13. The rated assembly or sprinkler system need to be approved and/or designed by a qualified fire protection engineer. (NOTE: if sprinklers are installed as noted above, this installation will not be necessary per exemption of code)	
Suggested Deadline Date:	28 Jul 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:	Doors in the path of egress were unlocked in the direction of egress only during working hours. Locking provisions were present at the doors.	
Source of Findings:	Photograph: Locking provision in door	
Suggested Plan of Action:	Remove all locking devices from all egress doors and means of egress components. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	
Suggested Deadline Date:	19 May 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	All doors in a means of egress are of the side-hinged swinging type.	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	Collapsible gates were installed in most of the exits.	
Source of Findings:	Photograph: Collapsible gate in the means of egress	
Suggested Plan of Action:	Replace non-compliant doors and frames in the means of egress with side-swinging doors. Replacement doors shall be a minimum width of 0.8 m (32 in), and are listed, approved, self-closing, fire rated doors assemblies (door and frame) with latching panic hardware.	
Suggested Deadline Date:	28 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:	An external stair was provided at the back side of the main building. Exterior wall openings adjacent to stair and with for a distance 3.05 m (10 ft) beyond the end of the stair were not fire protected.	
Source of Findings:	Photograph: Exterior stair	

Suggested Plan of Action:	Provide a 1-hour fire-resistive rated assembly with 0.75-hour opening protection for openings to the stair and for a distance 3.05 m (10 ft) beyond the ends of the stair between the exterior exit stairs and the building to achieve the required separation. The rated assembly should be approved and/or designed by a qualified fire protection engineer.	
Suggested Deadline Date:	28 Jul 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:	Occupant loads on each level (floor) do not exceed the capacity of the available means of egress.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	3rd Floor Load = 850 Capacity = 699, 5th Floor Load = 850 Capacity = 699, Roof Dining Load = 1300 Capacity = 699.	
Source of Findings:	Visual Assessment: Egress capacity exceeded	
Suggested Plan of Action:	Add another exit stair to the production facility to increase the number of allowable occupants per floor to 1300 as reported for the Dining level. Alternately, reduce the number of occupants on all levels to 699 or fewer.	
Suggested Deadline Date:	31 Dec 2014	
Standard:	Alliance Standard Part 6 Section 6.4 Occupant Load	
Question:	Means of egress are free from impediments, obstructions, and stored materials.	
Priority Level:	High	
Non-Compliance Level:	1	
Description:	Equipment in aisles in the laundry area of ground floor.	
Source of Findings:	Visual Assessment: Storage in egress path	
Suggested Plan of Action:	Rearrange equipment and aisles in the laundry area of the ground floor to limit travel distance to an exit to 150 feet or less.	
Suggested Deadline Date:	31 Dec 2014	
Standard:	Alliance Standard Part 6 Section 6.3.8 Impediments to means of egress and Section 6.3.9 Reliability	

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:	All doors of the stairs were collapsible doors and were opened duration working hour. No fire doors or compliant hardware was installed.	
Source of Findings:	Photograph: Collapsible door in stair, Visual Assessment: No re-entry provided	
Suggested Plan of Action:	Install required fire doors and latching hardware. Provide re-entry hardware at least at the 3rd floor from the stairwells according to the Standard.	
Suggested Deadline Date:	31 Dec 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	All occupied roofs are provided with parapets or guards with a minimum height of 1067 mm (42 in.).	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Occupied roofs were provided with 36 in. parapets.	
Source of Findings:	Photograph: Parapet	
Suggested Plan of Action:	Provide parapets or guards with a minimum height of 1067 mm (42 in.). Parapets that are constructed on rated exterior construction shall be of the same rating as the exterior wall rating in accordance with BNBC Part 3 Section 3.1.15.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Alliance Standard Part 6 Section 12 Handrails and Guards	
Question:	Occupant loads are posted for every assembly and production floor in a conspicuous space near the main point of egress.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Occupant loads were not posted for assembly and production floor.	
Source of Findings:	Visual Assessment: No signage has been posted containing occupant load during this inspection.	
Suggested Plan of Action:	Post the occupant load for all assembly and production floor areas in a conspicuous space near the main exit or exit access doorway for the space.	

Suggested Deadline Date:	19 May 2014	
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	
Question:	All paths of egress are provided with compliant means of illumination.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Emergency lights are available but lighting level could not be verified during assessment because of sunlight. Also no test report or certification of illumination was found from factory end during assessment.	
Source of Findings:	Photograph: Emergency Light	
Suggested Plan of Action:	Ensure through testing (light meter) or other certification that means of egress have sufficient illumination per Alliance Standards requirement for all corridors, exit doors, aisles and stairways. If non-compliant, install emergency lighting for all paths of egress. Illumination needs to be a minimum of 10 lux for all corridors, exit doors and stairways. Illumination for aisles needs to be a minimum of 2.5 lux. Egress lighting shall be provided with emergency power or supplemented with battery powered lights that provide a minimum of 10 lux for not less than 30 mins in the event of failure of normal lighting.	
Suggested Deadline Date:	20 Oct 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:	Emergency power for means of egress illumination is verified at least once per year. If battery operated lights are used, these lights are tested on a monthly basis. Functional testing of battery powered lights is provided for a minimum 90 min once per year.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No testing plan and records were available during visit.	
Source of Findings:	Document Review: No document has been shown during this inspection.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures the operation of all exit lighting are 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 lights shall be provided for a minimum 90 min once per year.	
Suggested Deadline Date:	02 Jun 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:	An exit sign was not available at NE corner stair where path direction was changed for exit discharge from NE corner stair to the exterior of the building through basement.	
Source of Findings:	Photograph: Exit sign not available in egress path (Direction change)	
Suggested Plan of Action:	Need to install Illuminated exit signs with backup power and continuous graphics at entrances at 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:	20 Oct 2014	
Standard:	Alliance Standard Part 6 Section 6.11 Exit Signs	
Question:	Changes in elevation of walking surfaces do not exceed 6.35 mm (1/4 in) unless provided with a beveled slope of 1 in 2 that does not exceed 12.7 mm (1/2 in).	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Change in elevation was found at NE corner stair landing at roof.	
Source of Findings:	Photograph: Changes in elevation	
Suggested Plan of Action:	Need to minimize the change in elevation to make the walking surface mostly level as per Alliance Standard.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Alliance Standard Part 6 Section 6.3.4 Walking Surfaces	
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:	Not in compliance with Alliance standard part 10 section 10.12.1.4. No testing plan and records were available during visit.	
Source of Findings:	Document Review: No document has been shown during this assessment.	

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 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:	02 Jun 2014	
Standard:	Alliance Standard Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape.	
Question:	Handrails are provided on both sides of each stairway. Intermediate handrails are provided when the stair width exceeds 2.2 m (87 in.). Handrails are not mounted lower than 760 mm (30 in.) or higher than 1100 mm (44 in.).	 
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Handrails were provided on one side of each stairway. Intermediate handrail is not required based on stair width. Also there was no handrail in external stair of main building.	
Source of Findings:	Photograph: One side handrail, No handrail in exterior stair	
Suggested Plan of Action:	Need to install handrails on the both side of the stairs. A minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread need to be maintained when installing new handrails. The spacing between vertical members will not exceed 200 mm (8 inch).	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards	
Question:	Stair designation signs are provided at each floor entrance from the stair to the floor in English and Bengali. Signs indicate the name of the stair and the floor level. Signs are posted adjacent to the door.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	No stair designation sign was posted at any stair.	
Source of Findings:	Photograph: No stair designation sign	
Suggested Plan of Action:	Install signage adjacent to each stair door indicating the stair name and the floor level in both English and Bengali.	
Suggested Deadline Date:	02 Jun 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:	1
Description:	As per verbal information of factory personnel, people trained by BGMEA, Fire service & Cappela but certificate or any other document were not available during assessment regarding above mentioned training.
Source of Findings:	Document Review: No document has been shown during this assessment.
Suggested Plan of Action:	Need to get required number of people trained and certified in firefighting, first aid, and rescue training by the appropriate authority.
Suggested Deadline Date:	20 Oct 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:	2
Description:	1. Daycare was located at 1st floor of security building and not directly connected to an exit enclosure. 2. Oil filled transformer was located at basement of utility building. The outer wall of this room was 5" brick wall having unprotected openings (including doors & windows) on this wall. Generator & electrical switchgear also placed in this room without fire separation with transformer section. 3. There was no stair at utility building. Stair of main building is used for egress from upper floor of utility building. Small steel stair was connected from utility building to main building for using the stair of main building which was not fire rated and act as an exterior stair.
Source of Findings:	Photograph: 1.Day care, 2.Oil filled transformer, 3. Connecting stair from utility building to main building
Suggested Plan of Action:	1. Daycare occupancies which are accessory to other occupancies shall be located on the ground floor with a maximum travel distance of 9 m (30 ft). If located on a higher floor, direct access to an exit enclosure shall be provided. 2. Oil filled transformer for non high rise building need to be separated by a minimum 2 hr. fire resistive rated construction. 3. Need to provide fire resistive rated passageway (Stair) from utility building to main building and provide 1-hour fire-resistive rated assembly with 0.75-hour opening protection in line with the stair and extend 3.05 m (10 ft.) beyond the ends of the stair. Install required number of exits by consulting with a qualified fire expert. If new stair needs to be installed, building should also be assessed structurally so that the new construction does not put any adverse effect in the existing structure.
Suggested Deadline Date:	28 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:	An emergency evacuation plan has not been developed and communicated to all employees which is not in compliance with Alliance Standards Part 13 Section 13.1 Fire Safety Director.	
Source of Findings:	Document Review: No document has been shown during this assessment.	
Suggested Plan of Action:	Develop an emergency evacuation plan which includes all components required by the Alliance Standards and communicate the plan to all employees.	
Suggested Deadline Date:	02 Jun 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:	1	
Description:	The factory has not received the Alliance Safety Training Curriculum from Alliance till the date of assessment and has not conducted safety training curriculum as per Alliance Standards Part 13.	
Source of Findings:	Document Review: No document has been shown during this assessment.	
Suggested Plan of Action:	Training programs need to be implemented and documented in accordance with the Alliance Safety Training Curriculum.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Alliance Standards Part 13	
Question:	A Fire Safety Director position has been filled.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	No fire safety director posted in this factory, which is not in compliance with Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Source of Findings:	Document Review: No HR file of Fire Safety Director has been shown during this assessment.	

Suggested Plan of Action:	Create a Fire Safety Director position and fill the position with an individual that has had sufficient training to be able to carry the required duties.
Suggested Deadline Date:	20 Oct 2014
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director
Question:	Fire Department pre-planning has been completed.
Priority Level:	Low
Non-Compliance Level:	1
Description:	Fire Department pre-planning has not been completed which is not in compliance with Alliance Standards Part 13 Section 13.1 Fire Safety Director.
Source of Findings:	Document Review: No document has been shown during this assessment.
Suggested Plan of Action:	Complete fire department pre-planning activities with the local Fire Service and Civil Defence.
Suggested Deadline Date:	02 Jun 2014
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director
Question:	A written housekeeping policy is established and enforced.
Priority Level:	Low
Non-Compliance Level:	1
Description:	No written housekeeping policy has established and enforced which is not in compliance with Alliance Standards Part 13 Section 13.6 Housekeeping. A designated staff of 30 is assigned to housekeeping, and lint blowdown is performed weekly. Excess storage was generally minimal. Finished goods were piled in half of the locker room. Bags of rags were piled up in the basement level storage room.
Source of Findings:	Document Review: No document has been shown during this assessment. , Visual Assessment: Storage is not maintained orderly
Suggested Plan of Action:	Establish written corporate and planed 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. Separate storage rooms with rated construction. Relocate all stored combustibles to store rooms.
Suggested Deadline Date:	12 Jan 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:	1	
Description:	Hot-work operation was ongoing in the facility during visit but no hot-work permit program has been established. Hot work is generally done in the shop. Verbal notice is given to the maintenance manager.	
Source of Findings:	Photograph: Hot Work	
Suggested Plan of Action:	Implement a hot work permit program. The program shall comply with the requirements of NFPA 51B.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B	