

INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **Hemple Rhee Mfg Co (BD) Ltd**

Address: **Plot # 23-24, Sector # 06 Chittagong Export
Processing Zone Chittagong Export Processing Zone
Chittagong Chittagong Bangladesh**

Assessor: **Bureau Veritas**

Date: **23 Mar 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:	Hemple Rhee Mfg Co (BD) Ltd
Address:	Plot # 23-24, Sector # 06 Chittagong Export Processing Zone Chittagong Export Processing Zone Chittagong Chittagong Bangladesh
Country:	Bangladesh
Province:	Chittagong
City:	Chittagong
Zip Code:	4100
Audit Duration:	2 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	05-08-14
Final Report Date:	06-23-14
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	There are 9 buildings in the factory premises out of which one is main production building and eight are ancillary buildings. The buildings are named as: 1) Four story main production building (Two story RCC and two story prefab shed), 2) Single story RCC security building, 3) Single story prefab wastage store shed 1, 4) Single story prefab wastage store shed 2, 5) Single story prefab wastage store shed 3, 6) Single story prefab generator shed, 7) Single story RCC sub-station building, 8) Single story RCC boiler building, 9) Single story prefab childcare and dining shed.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	1) Four story main production building: Building height (Highest occupied floor level): 13.47 m or 44.17 ft [Height up to roof: 20.85 m or 68.42 ft], Stories above grade: 4, Stories below grade: 0, Occupied levels: 4, 2) Single story RCC security building: Building height (Highest occupied floor level): 30 cm or 1 ft above grade [Height up to roof: 3.05 m or 10 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 3) Single story prefab wastage store shed 1: Building height (Highest occupied floor level): At grade [Height up to roof: 3.05 m or 10 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 4) Single story prefab wastage store shed 2: Building height (Highest occupied floor level): At grade [Height up to roof: 3.05 m or 10 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, and see the description.
Approximate Building Area (SF):	Total area of all buildings in the factory premises: 98522.00 sft. Building wise breakdown as follows: 1) Four story RCC main production building: 90168.00 sft (Ground floor: 22542.00 sft, 1st floor: 22542.00 sft, 2nd floor: 22542.00 sft, 3rd floor: 22542.00 sft), 2) Single story RCC security building: 175.00 sft, 3) Single story prefab wastage store shed 1: 490.00 sft, 4) Single story prefab wastage store shed 2: 212.00 sft, 5) Single



	story prefab wastage store shed 3: 1952 sft, 6) Single story prefab generator shed: 341 sft, 7) Single story RCC sub-station building: 491 sft, 8) Single story RCC boiler building: 281 sft, 9) Single story prefab childcare and dining shed: 4412 sft.
Date of Building Construction:	Started in 2002 and finished in 2004 (All buildings).
Date of Last Building Renovation/Addition:	No renovation done.
Ancillary Structures in Complex:	1) Single story RCC security building, 2) Single story prefab wastage store shed 1, 3) Single story prefab wastage store shed 2, 4) Single story prefab wastage store shed 3, 5) Single story prefab generator shed, 6) Single story RCC sub-station building, 7) Single story RCC boiler building, 8) Single story prefab childcare and dining shed.
Approximate Ancillary Structures Area (SF):	1) Single story RCC security building: 175.00 sft, 2) Single story prefab wastage store shed 1: 490.00 sft, 3) Single story prefab wastage store shed 2: 212.00 sft, 4) Single story prefab wastage store shed 3: 1952 sft, 5) Single story prefab generator shed: 341 sft, 6) Single story RCC sub-station building: 491 sft, 7) Single story RCC boiler building: 281 sft, 8) Single story prefab childcare and dining shed: 4412 sft.
Number of Occupants:	Total number of occupants: 1933. 1) Main building: 1895 (Ground floor: 250, 1st floor: 672, 2nd floor: 773, 3rd floor: 200), 2) Single story RCC security building: 2, 3) Single story prefab wastage store shed 1: 1, 4) Single story prefab wastage store shed 2: 1, 5) Single story prefab wastage store shed 3: 1, 6) Single story prefab generator shed: 1, 7) Single story RCC sub-station building: 1, 8) Single story RCC boiler building: 1, 9) Single story prefab childcare and dining shed: 30.
Number of Ancillary Levels (Stories):	1) Single story RCC security building: Building height (Highest occupied floor level): 30 cm or 1 ft above grade [Height up to roof: 3.05 m or 10 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 2) Single story prefab wastage store shed 1: Building height (Highest occupied floor level): At grade [Height up to roof: 3.05 m or 10 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 3) Single story prefab wastage store shed 2: Building height (Highest occupied floor level): At grade [Height up to roof: 3.05 m or 10 ft], Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, and see the description.



ASSESSMENT FINDINGS

Fire Protection Construction

Question:	Are exit enclosures provided with fire-resistive rated construction barriers?
Priority Level:	High
Non-Compliance Level:	3
Description:	The exit enclosures of stairs on all floor are not provided with fire-resistive rated construction barriers.
Source of Findings:	Photograph: Exit enclosures of stairs not fire rated.
Suggested Plan of Action:	Provide 2 hr fire-resistive rated construction barriers at exit enclosures. Fit outward opening, side-swinging, self-closing, non-lockable certified 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:	30 Aug 2014
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation
Question:	Are shafts provided with the minimum fire-resistance rating?
Priority Level:	High
Non-Compliance Level:	3
Description:	Cargo Lift enclosure (Capacity 1 Ton; size 6'-6" x 6'-6") is not fire rated. Cargo lift shaft is made by prefabricated CI sheet.
Source of Findings:	Photograph: Elevator shaft (Cargo Lift core) is not fire protected.
Suggested Plan of Action:	Provide 2 hr fire rated shaft enclosure with 1.5 hr certified fire rated doors in accordance with Alliance Standards Part 4 Section 4.5.7.
Suggested Deadline Date:	30 Aug 2014
Standard:	Reference Alliance Standards Part 4 Section 4.5.7.1 through 4.5.7.3





Question:	Are openings and penetrations through rated walls and/or assemblies protected?
Priority Level:	High
Non-Compliance Level:	2
Description:	Doors & windows of substation room, generator room, boiler room, carton store, accessories store at ground floor. Also at main building store at 1st floor, accessories store at 2nd floor, fabric store at 3rd floor are not protected.
Source of Findings:	Photograph: Photo-1: Unprotected door of accessories store at GF. Photo-2: Window of boiler room.
Suggested Plan of Action:	Close all windows and other opening similar to this on any fire rated walls across the entire premise and provide certified fire rated doors.
Suggested Deadline Date:	30 Aug 2014
Standard:	Includes doors, windows, ducts, piping, etc. Reference Alliance Standards Part 4 Section 4.6 Opening Protectives and Section 4.7 Penetrations
Question:	Is each floor separated with a fire-resistive rated construction barrier?
Priority Level:	High
Non-Compliance Level:	2
Description:	At main building ground floor and 1st floor separated with a RCC slab. 2nd and 3rd floor separated by RCC slab resting on steel structure where steel columns and decks are not fire resistive.
Source of Findings:	Visual Assessment: 2nd and 3rd floor separated by RCC slab resting on steel structure where steel columns and decks are not fire-resistive.
Suggested Plan of Action:	Cover the steel structural members including decks and columns to provide required floor separation rating. Alternatively, provide automatic sprinkler protection throughout the building.
Suggested Deadline Date:	10 Aug 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:	2
Description:	Generator room (wired wall and tin shed roof), boiler room and packing section at ground floor are not separated by fire-resistive rated construction barriers. Also Fire-resistive rated construction barrier not available at 1. Carton store and childcare-prayer room, 2. At accessories store at ground floor(Glass





	partition), 3. Process storage of packing area (storage area=824 sft, height=8.5 ft and distance from nearest storage=5.0 ft) and carton area, 4. Store at 1st floor of main building, 5. Accessories Store at 2nd floor of main building, 6. Fabric Store at 3rd floor of main building, 7. Process storage of cutting area (storage area=609 sft, height=12.5 ft and distance from nearest storage=3.0 ft) and production area, 8. Office and kitchen (Operated by portable gas cylinder) are not separated by fire-resistive rated construction barriers.	
Source of Findings:	Visual Assessment: There are no fire rated separations between hazards described above.	
Suggested Plan of Action:	Provide fire-resistive rated construction barriers between hazard types in accordance with BNBC Part 3 Chapter 3 and Table 3.2.1 . Consult a qualified fire protection engineer to design the required rated construction barrier.	
Suggested Deadline Date:	22 Nov 2014	
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Certificates of Occupancy for each building have been issued and are on file.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	No occupancy certificate available for any building in the factory premises.	
Source of Findings:	Document Review: Document review shows that the factory does not have a occupancy certificate.	
Suggested Plan of Action:	Apply to CEPZ for issuance of occupancy certificate and pursue the matter to expedite.	
Suggested Deadline Date:	19 Jul 2014	
Standard:	Are certificates of occupancy provided for each building or ancillary structure?	
Question:	Occupancy Type	
Priority Level:		
Non-Compliance Level:		
Description:	1) Four story main production building, [Ground floor: G2 (Finishing) & H2 (Storage), 1st floor: G2 (Sewing), F1 (Office), H2 (Storage), 2nd floor: G2 (Sewing), F1 (Office), H2 (Storage), 3rd floor: G2 (Cutting, sample section), F1 (Office), H2 (Storage), K1 (Miscellaneous)], 2) Single story RCC security building: F1 (office), 3) Single story prefab wastage store shed 1: H2 (Storage), 4) Single story prefab wastage store shed 2: H2 (Storage), 5) Single story prefab wastage store shed 3: H2 (Storage), 6) Single story prefab generator shed: K1 (Generator), 7) Single story RCC sub-station building: K1 (Transformer), 8) Single story RCC boiler building: K1 (Boiler), 9) Single story prefab childcare and dining shed: B2 (Childcare), E3 (Dining & Prayer room), H2 (Storage).	





Source of Findings:	
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Provide Occupancy Type for each building and structure. Reference Alliance Standards Part 3 Use and Occupancy
Question:	Construction Type
Priority Level:	
Non-Compliance Level:	
Description:	1) Four story main production building: (Ground floor to 1st floor: Type 1, 2nd floor to 3rd floor: Non-rated), 2) Single story RCC security building: Type 1, 3) Single story prefab wastage store shed 1: Non-rated, 4) Single story prefab wastage store shed 2: Non-rated, 5) Single story prefab wastage store shed 3: Non-rated, 6) Single story prefab generator shed: Non-rated, 7) Single story RCC sub-station building: Type 1, 8) Single story RCC boiler building: Type 1, 9) Single story prefab childcare and dining shed: Non-rated.
Source of Findings:	
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Provide construction type for each building and ancillary structure. Reference Alliance Standards Table 3.3.1
Question:	Height of Highest Occupied Floor Level Above Grade
Priority Level:	
Non-Compliance Level:	
Description:	1) Four story main production building: 13.47 m or 44.17 ft, 2) Single story RCC security building: 30 cm or 1 ft above grade, 3) Single story prefab wastage store shed 1: At grade, 4) Single story prefab wastage store shed 2: At grade, 5) Single story prefab wastage store shed 3: At grade, 6) Single story prefab generator shed: At grade, 7) Single story RCC sub-station building: At grade, 8) Single story RCC boiler building: At grade, 9) Single story prefab childcare and dining shed: At grade.
Source of Findings:	
Suggested Plan of Action:	



Suggested Deadline Date:	
Standard:	Provide maximum height of highest occupied floor level above grade for each type of building and ancillary structure.
Fire Protection Systems	
Question:	Does the building have a fire pump?
Priority Level:	High
Non-Compliance Level:	3
Description:	There is no dedicated fire pump available in the factory premises to supply water in case of fire incidence.
Source of Findings:	Visual Assessment: There is no dedicated fire pump available in the factory.
Suggested Plan of Action:	Install a pump dedicated for fire fighting or fire protection following the requirements of NFPA 20 as mentioned in Alliance Standard Section 5.5.1. Fire pump installation is to be tested for final acceptance in presence of Alliance and a final inspection of the installation shall be conducted by the Alliance prior to final acceptance of the installation by the Alliance as per clause 5.5.5. Acceptance testing of the installation shall be in accordance with NFPA 20, 22, and 24 testing requirements. Documentation of all testing shall be submitted to the Alliance for review prior to final acceptance by the Alliance. This pump is to be connected to an alternative power source like generator. And the generator is to be connected with ATS (auto starter).
Suggested Deadline Date:	18 Aug 2014
Standard:	Alliance Standard Part 5 Fire Protection Systems
Question:	Trouble or alarm notifications were not indicated on the fire alarm control panel.
Priority Level:	High
Non-Compliance Level:	3
Description:	Centralized automatic fire alarm and smoke/detection system with control panel is not available.
Source of Findings:	Visual Assessment: Fire detection panel is not centrally addressable.
Suggested Plan of Action:	Install a centralized automatic fire alarm and smoke/heat detection system with control panel following the requirement of NFPA 72 throughout all new and existing buildings and structures.
Suggested Deadline Date:	05 Jul 2014
Standard:	Alliance Standard Part 13 Section 13.10 Maintenance of Fire Protection Equipment




Question:	Is the building protected by an automatic sprinkler system?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	At Main Building highest occupied floor level: 13.46m (44.17 ft) which is less than 23 m (75 ft) but non rated floor area of 2nd and 3rd floor is 22,542 sq. ft. each. Therefore, automatic sprinkler system required for these floors according to Alliance Standards Part 3, Section 3.5.3 as alternative to providing rated construction.	
Source of Findings:	Visual Assessment: No sprinkler system.	
Suggested Plan of Action:	Install an automatic sprinkler system throughout the building designed by a qualified fire protection engineer. Alternately, provide fire-resistive rated construction for the non-rated floors. All installation and design requirements outlined in BNBC Part 4 Chapter 4 shall be replaced by the requirements of NFPA 13. The hydraulic design of the sprinkler system has to be pre-approved by CoE of Alliance. 10-Aug-14- Start Design, 12-nov-14- Design Complete, 25-Jan-15- Begin Construction	
Suggested Deadline Date:	12 Nov 2014	
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:	2	
Description:	Height of the highest occupiable floor of the main building is above 10m (33 ft) above grade so standpipe systems shall be installed throughout the building as mentioned in Alliance Standard 5.4.2. But there is no standpipe system in the buildings meeting the requirement of NFPA 14, 20, 22 and 25. 02 nos Class-II standpipe hose connection (40 mm) installed per floor, But there is no Class-I type standpipe system installed in stairwells including occupied roof. At roof hose pressure was negligible.	 
Source of Findings:	Photograph: Photo-1: No Class-I standpipe hose connection in stairwells. Photo-2: Class-II standpipe hose connection installed in floor., Visual Assessment: During site tour, no standpipe system was noticed in the stairwells.	
Suggested Plan of Action:	Install a standpipe system at required locations designed by a qualified fire protection engineer. The system should be compliant with the requirements of NFPA 14. The hydraulic calculations should be reviewed by Alliance and review to be completed prior to start of work. All standpipe system installations shall be submitted for review by the Alliance for review prior to commencement of installation according to 5.4.3.2. Standalone standpipe systems shall meet the local BNBC requirements with a minimum 450 kPa (65 psi) pressure at the hydraulically most remote hose connection or NFPA 14. This requirement is as per clause 5.4.3. Testing of the installation shall be conducted in accordance with NFPA 14 acceptance testing requirements. Documentation of all testing	



	hall be submitted for review by the Alliance. Final inspection and testing of the installation shall be witnessed by the Alliance as per clause 5.4.3.3.
Suggested Deadline Date:	30 Aug 2014
Standard:	Does the building have a standpipe system installed where required. Alliance Standard Part 5 Section 5.4.2
Question:	Fire extinguishers are inspected, tested, and maintained as required.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Extinguishers are inspected monthly by factory's concerned people. But no document was found in support of i) annual maintenance of extinguishers by a servicing agent and ii) annual testing of nozzle of CO2 extinguisher. These are required as per NFPA 10.
Source of Findings:	Document Review: Documents review shows that fire extinguishers are inspected, tested, and maintained in every month.
Suggested Plan of Action:	Fire extinguishers are to be inspected, tested, and maintained in accordance with NFPA 10 Chapter 7 as demanded in Alliance Standard Part 13 Section 13.10.3.
Suggested Deadline Date:	02 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:	3
Description:	Fire alarm and detector control panel is not available at the premises.
Source of Findings:	Visual Assessment: There were no fire alarm and detector control panel in the factory premises.
Suggested Plan of Action:	Automatic or manual fire alarm and detection systems need to be installed following the requirement of NFPA 72 throughout all new and existing buildings and structures based on occupancy type where required as per Alliance Standard Part 5 Clause 5.7. Once system is installed, arrange for direct connection of the fire alarm and detection system to a central station monitoring service or the Fire Service and Civil Defense 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 Defense can be set up, a person trained to contact the Fire Service and Civil Defense 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:	05 Jul 2014	
Standard:	Alliance Standard Part 5 Section 5.7.5 Monitoring	
Question:	Standpipe system piping is free of mechanical damage, leakage, and corrosion?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Complete standpipe system is not installed throughout the buildings. Mechanical damage, leakage or corrosion was not found in the available standpipe system.	
Source of Findings:	Visual Assessment: Mechanical damage, leakage or corrosion was 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:	22 Nov 2014	
Standard:	NFPA 25 Chapter 6 Standpipe and Hose Systems	
Question:	Are fire department connections provided and clearly identified for the Fire Protection Systems?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Fire department (Siamese) inlet connection is provided at Ground Floor but covered by MS frame.	
Source of Findings:	Visual Assessment: Fire department (Siamese) inlet connection is provided at Ground Floor.	
Suggested Plan of Action:	Remove MS cage to allow fire department pumper vehicles to draw water from ground-level or underground water storage tanks as per Alliance Standard 5.5.4	
Suggested Deadline Date:	02 Oct 2014	
Standard:	Alliance Standard Part 5 Section 5.5.4 Fire Department Connections	





Question:	Are portable fire extinguishers installed throughout the building at required locations and mounted at the correct height?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Extinguishers is not provided at 100 feet interval in ground, 1st and 2nd floor.
Source of Findings:	Photograph: Extinguishers is not provided at 100 feet interval in ground, 1st and 2nd floor.
Suggested Plan of Action:	Extinguishers shall be placed so that maximum travel distance to the nearest unit shall not exceed 30 m (100 ft) in accordance with Alliance Standard, Part-5, Section-5.6.1.
Suggested Deadline Date:	30 Aug 2014
Standard:	BNBC Part 4 Section 4.10 and NFPA 10
Question:	Are inspection, maintenance, and testing procedures of the fire pump documented and up to date?
Priority Level:	Low
Non-Compliance Level:	3
Description:	There is no documentation of maintenance of fire pump because the building doesn't have a dedicated fire pump.
Source of Findings:	Document Review: There is no documentation of maintenance of fire pump because the building doesn't have a dedicated fire pump.
Suggested Plan of Action:	Install a pump dedicated for fire fighting or fire protection following the requirements of NFPA 20 as mentioned in Alliance Standard Section 5.5.1. Then establish an inspection, maintenance, and testing program for the fire pump. Program must comply with NFPA 25.
Suggested Deadline Date:	18 Aug 2014
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps
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 and maintenance plan and record found for testing and maintaining of standpipe system as per requirement of 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:	Establish an inspection, maintenance, and testing program for the standpipe and hose system. Program must comply with the requirements of NFPA 25	
Suggested Deadline Date:	22 Nov 2014	
Standard:	Reference NFPA 25 Chapter 6 Standpipe and Hose Systems Table 6.1.1.2	
Question:	Is signage for the standpipe system installed at required locations and on required components?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Complete standpipe system is not installed throughout the buildings. Signage for the available standpipe is not installed.	
Source of Findings:	Photograph: Signage for the available standpipe is not installed.	
Suggested Plan of Action:	Install a standpipe system and provide required signage. The system is to be compliant with the requirements of NFPA 14.	
Suggested Deadline Date:	19 Jul 2014	
Standard:	Reference NFPA 14 Chapter 6	
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:	The external steel stair of east side ends near ground floor and the passageway re-enter into ground floor, besides the exit path there are production units (packing section, iron section) and this exit path is not fire separated. Also the external concrete stair of south-west side ends near ground floor, but the exit path pass through corridor besides which window of accessories store, non rated wall and window of worker dining exist is not fire separated.	
Source of Findings:	Photograph: Stair-02 exit do not discharge directly to the exterior of the building.	
Suggested Plan of Action:	Provide rated exit passageway i.e. 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. Source of Finding: The external concrete stair	



	of south-west side ends near ground floor, but the exit path pass through corridor besides which window of accessories store, non rated wall and window of worker dining. Also stair of east side re-enter into ground floor. Picture shows south-west stair ends at non-rated passageway.	
Suggested Deadline Date:	30 Aug 2014	
Standard:	Alliance Standard Part 6 Section 6.17 Exit Discharge. See Section 16.7.2 and 16.7.3 for exceptions.	
Question:	All doors in a means of egress are of the side-hinged swinging type.	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	Rolling shutter is used in exit-3 (south-west) in all floor.	
Source of Findings:	Photograph: Rolling shutter is used in exit-3 (south-west) in all floor	
Suggested Plan of Action:	Replace all collapsible, sliding, roll-down gates and shutters in means of egresses with side-hinged swinging type doors of proper width and rating.	
Suggested Deadline Date:	30 Aug 2014	
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	Means of egress are free from impediments, obstructions, and stored materials.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Aisles is partially block by combustible in 1st floor and by table-chair in 2nd floor.	
Source of Findings:	Photograph: Aisles block in 1st floor.	
Suggested Plan of Action:	Keep means of egress continuously free and clear of all obstructions or impediments to full instant use in the case of fire or other emergency. Remove all locks or other devices installed on a means of egress component that would prevent any occupant from having safe egress from the building or structure.	
Suggested Deadline Date:	07 Jun 2014	
Standard:	Alliance Standard Part 6 Section 6.3.8 Impediments to means of egress and Section 6.3.9 Reliability	



Question:	Doors are not locked in the direction of egress under any conditions. All hasps, locks, slide bolts, and other locking devices have been removed where required.
Priority Level:	High
Non-Compliance Level:	2
Description:	There is provision for hasps, locks, slide bolts are available at the exit doors but not locked.
Source of Findings:	Photograph: Doors in the path of egress are unlocked
Suggested Plan of Action:	Remove all hasps, locks, slide bolts, or other locking devices at the noted locations
Suggested Deadline Date:	21 Jun 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:	2
Description:	Doors along the path of egress have a minimum width of 0.8 m (32 in) but not have required ratings. All the doors are swing glass, collapsible type and rolling shutter.
Source of Findings:	Visual Assessment: Doors along the path of egress have a minimum width of 0.8 m (32 in) but not have required ratings.
Suggested Plan of Action:	Provide 1 hr fire protective opening assemblies in 1 hr rated exit enclosure. Provide 1.5 hr fire protective opening assemblies in 2 hr rated exit enclosure. 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:	30 Aug 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:	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:	2





Description:	Two external steel stair available at East and south side of the building. Opening line with the stair and extend 3.05m (10 ft) beyond the end of the stair are not fire protected.
Source of Findings:	Photograph: A Door (Exit-2) swing out over East side stair (stair-2) landing
Suggested Plan of Action:	Provide a fire-resistive rated assembly 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:	20 Aug 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:	Exits are limited to Class A and Class B interior materials.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Exits are not limited to Class A and Class B interior materials.
Source of Findings:	Photograph: Exit made of swing glass.
Suggested Plan of Action:	Remove non-compliant materials and replace with materials meeting the requirements of Class A or Class B materials.
Suggested Deadline Date:	22 Nov 2014
Standard:	Alliance Standard Part 6 Section 6.3.2 Interior Finish
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 near the main point of egress in any floor.
Source of Findings:	Photograph: Occupant loads are not posted near the main point of egress.
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:	05 Jul 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:	Illuminated exit sign is provided at three exit stairs, but emergency light for illumination provided is insufficient in all floor.
Source of Findings:	Photograph: Paths of egress without 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. The means of egress paths shall be illuminated at all times the building is occupied. Illumination shall be a minimum of 10 lux for all corridors, exit doors, and stairways. Aisles shall be provided with a minimum 2.5 lux."
Suggested Deadline Date:	22 Nov 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:	Record of verifying emergency power for means of egress illumination was not found as required in accordance with Alliance Standards Part 10 Section 10.12.2.3.
Source of Findings:	Document Review: No relevant document found.
Suggested Plan of Action:	Develop a testing and maintenance program that ensures the operation of all exist 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:	05 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 not placed sufficiently along the path of egress.	
Source of Findings:	Photograph: Illuminated exit signs not placed along the path of egress	
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:	22 Nov 2014	
Standard:	Alliance Standard Part 6 Section 6.11 Exit Signs	
Question:	Emergency power for exit signs is tested at least once per year. If battery operated, these lights are tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No plan or record of conducting periodic tests for the emergency battery backup of illumination of the exit signs.	
Source of Findings:	Visual Assessment: No relevant document available.	
Suggested Plan of Action:	Develop a testing and maintenance program that ensures the emergency power for exit signs is tested at least once per year. If battery operated signs are used, these lights are tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year.	
Suggested Deadline Date:	05 Jul 2014	
Standard:	Alliance Standard Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape.	
Question:	Compliant guards are provided on the open sides of egress components where the elevation exceeds 760 mm (30 in) above the ground or floor below.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The plinth level of Ground Floor is 36in above the grade level, compliant guards are provided in one side only.	



Source of Findings:	Photograph: Compliant guards not provided on the open sides of egress at GF	
Suggested Plan of Action:	Provide guard rail of minimum 1067 mm (42 in.) height on both sides.	
Suggested Deadline Date:	22 Nov 2014	
Standard:	Alliance Standard Part 6 Section 6.3.7 Guards	
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:	Stair-1 at west side have handrail in one side only. Stair-2 & 3 at south and east side have handrail on both side. Handrail height of the stairs is 33 in.	
Source of Findings:	Photograph: Handrails not provided on both sides of stairway-1.	
Suggested Plan of Action:	Provide handrails on both side of each stairway of height between the range 865 mm (34 in.) and 965 mm (38 in.).	
Suggested Deadline Date:	22 Nov 2014	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards	
Question:	Interior finishes for means of egress meet the rating requirements for Class A, B and C materials.	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	Ratings of finishes materials are not obtained from factory authority. Tiles is used as finishes materials in floor.	
Source of Findings:	Visual Assessment: During site tour, interior finishes for means of egress are observed.	
Suggested Plan of Action:	Replace non-compliant finishes with finishes that have a maximum flame spread index of 75 and smoke developed index of 450 as tested in accordance with ASTM E 84	
Suggested Deadline Date:	22 Nov 2014	
Standard:	Alliance Standard Part 6 Section 6.3.2 Interior Finish	
Question:	Exit signs have appropriate illumination levels and contrasting graphics.	
Priority Level:	Low	



Non-Compliance Level:	2
Description:	Exit signs have not appropriate illumination levels and contrasting graphics as per standard.
Source of Findings:	Visual Assessment: Exit signs have appropriate illumination levels and contrasting graphics.
Suggested Plan of Action:	Make sure all required exit signs are illuminated continuously at all times. Exit signs may be illuminated either by lamps external to the sign or by lamps contained within the sign. The source of illumination shall provide not less than 50 lux at the illuminated surface with a contrast of not less than 0.5. Approved self-luminous signs which provide evenly illuminated letters having a minimum luminance of 0.2cd/m2 may also be used.
Suggested Deadline Date:	22 Nov 2014
Standard:	Alliance Standard Part 10 Section 10.12.1 Exit Signs
Question:	Stair designation signs are provided at each floor entrance from the stair to the floor in English and Bengali. Signs indicate the name of the stair and the floor level. Signs are posted adjacent to the door.
Priority Level:	Low
Non-Compliance Level:	2
Description:	Floor level and stair name not mentioned.
Source of Findings:	Photograph: Stair designation signs not provided at each floor entrance
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:	05 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:	Internal training record found for workers and staffs.
Source of Findings:	Photograph: Internal training record for workers and staffs.
Suggested Plan of Action:	Get at least 25 worker trained and certified in fire fighting, first aid and rescue training by the proper authority.





Suggested Deadline Date:	22 Nov 2014	
Standard:	Alliance Standard Part 13 Human Element Programs	
Question:	Fire Drills are conducted at required intervals based on building use type.	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Fire drills are conducted on regular interval but not under the direction of a Fire Safety Director. This does not meet the requirements of Alliance Standard Part 13 Section 13.2 and BNBC Part 4 Appendix A Page 10457.	
Source of Findings:	Document Review: Last fire drill done on 16 February 2014	
Suggested Plan of Action:	Fire drills shall be conducted under the direction of a Fire Safety Director.	
Suggested Deadline Date:	15 Aug 2014	
Standard:	Alliance Standards Part 13 Section 13.3 Fire Drills	
Question:	An emergency evacuation plan has been developed and communicated to all employees.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Any record of developing and communicating any emergency evacuation plan was not found.	
Source of Findings:	Document Review: No record of developing and communicating any emergency evacuation plan has been found.	
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:	05 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 are posted at the entrance to all exit stair in ground floor, but one map provided near one exit only from 1st to 3rd floor.
Source of Findings:	Photograph: Emergency egress maps not posted near exit-2 at 3rd floor
Suggested Plan of Action:	Post emergency egress maps at the entrance to each exit stair or main point of egress.
Suggested Deadline Date:	05 Jul 2014
Standard:	Alliance Standards Part 13 Section 13.4 Evacuation Plan
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 was available in accordance with the Alliance Safety Training Curriculum on fire safety.
Source of Findings:	Document Review: No record of training program was available on fire safety.
Suggested Plan of Action:	Implement training program with proper documentation in accordance with the Alliance Safety Training Curriculum on fire safety.
Suggested Deadline Date:	05 Jul 2014
Standard:	Alliance Standards Part 13
Question:	Storage areas underneath the cutting tables are clear of combustibles.
Priority Level:	Medium
Non-Compliance Level:	1
Description:	Storage areas underneath the cutting tables are not clear of combustibles in 3rd floor.
Source of Findings:	Visual Assessment: Storage under cutting table in 3rd floor
Suggested Plan of Action:	Remove all combustibles stored underneath the cutting tables at the noted locations.
Suggested Deadline Date:	25 Jul 2014





Standard:	Alliance Standard Part 17 Section 13.7.2 Cutting tables.
Question:	A hot-work permit program has been established.
Priority Level:	Low
Non-Compliance Level:	3
Description:	A hot-work permit program has been established yet.
Source of Findings:	Document Review: A hot-work permit program has been established yet.
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 authorities, necessary checks prior approval, standby fire watch and fire fighting equipment, sounding of alarm procedure, duration and expiry of permit and reapproval procedure etc.
Suggested Deadline Date:	22 Nov 2014
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B
Question:	A Fire Safety Director position has been filled.
Priority Level:	Low
Non-Compliance Level:	2
Description:	Documentation related to fire safety director position was not found.
Source of Findings:	Document Review: No documentation related to fire safety director position was found.
Suggested Plan of Action:	Create a Fire Safety Director position and fill the position with an individual that has had sufficient training to be able to carry the required duties
Suggested Deadline Date:	22 Nov 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:	2
Description:	Fire Department pre-planning has been completed yet.
Source of Findings:	Document Review: No documentation of fire department pre-planning was found.
Suggested Plan of Action:	Complete fire department pre-planning activities with the local Fire Service and Civil Defense in accordance with Alliance Standard, Part-13, Section-



	13.1.1(2).	
Suggested Deadline Date:	05 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 is not established and enforced yet	
Source of Findings:	Document Review: No documentation on written housekeeping policy was found.	
Suggested Plan of Action:	Establish written corporate and plant policies on housekeeping to ensure scheduled cleaning for floor, wall, ceiling, supply and return air ventilation systems. Promptly reschedule skipped cleanings. Provide a documented line of authority for authorizing a cleaning delay and rescheduling. As a general rule the maximum tolerable deposit thickness for loose fluffy lint is 13 mm (½ in.) over a maximum of 46.5 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:	14 Feb 2015	
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping	
Question:	Are all applicable permits up to date including Fire License & Boiler License.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Fire License available for 92000 sft area, but total constructed useable area is 98522 sft. Electrician license expired on 26.6.11. BERC license available for 190 KW which is expired on 22.11.2013, but total capacity of generator is 480 KW. Layout plan of a 4 storied industrial building approved by BEPZA,Dhaka in 17.8.2012. But Dining shed, Childcare room, wastage store at north side, Generator shed, Sub-station building has no approval.	
Source of Findings:	Document Review: Fire License available for 92000 sft area, but total constructed useable area is 98522 sft. Electrician license expired on 26.6.11. BERC license available for 190 KW which is expired on 22.11.2013, but total capacity of generator is 480 KW. Layout plan of a 4 storied industrial building approved by BEPZA,Dhaka in 17.8.2012. But Dining shed, Childcare room, wastage store at north side, Generator shed, Sub-station building has no approval.	
Suggested Plan of Action:	Apply Fire Department for Fire License of total area. Apply Electricity license issuing Board for renewal of electrician license. Apply to BERC for waiver certificate of total capacity of generator. Apply to BEPZA for approval of all ancillary structure at layout plan.	

Factory Name: **Hemple Rhee Mfg Co (BD) Ltd**

Address: **Plot # 23-24, Sector # 06 Chittagong Export Processing Zone Chittagong
Export Processing Zone Chittagong Chittagong Bangladesh**

Assessor: **Bureau Veritas**

Date: **23 Mar 2014**



ALLIANCE
FOR BANGLADESH WORKER SAFETY

Suggested Deadline Date:	05 Jul 2014
Standard:	Alliance Standard Part 13 Human Element Programs