

INITIAL ELECTRICAL ASSESSMENT REPORT (EAR)

Factory Name: **FCI BD, Ltd.**
Address: **Plot-36-39 Dhaka EPZ, Ganakbari, Savar Savar Dhaka
Bangladesh**
Assessor: **Sumerra**
Date: **01 Jun 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.



Factory Name: FCI BD, Ltd.

Address: Plot-36-39 Dhaka EPZ, Ganakbari, Savar Savar Dhaka Bangladesh

Assessor: Sumerra

Date: 01 Jun 2014



ALLIANCE
FOR BANGLADESH WORKER SAFETY

GENERAL INFORMATION

General Information

Factory Name:	FCI BD, Ltd.
Address:	Plot-36-39 Dhaka EPZ, Ganakbari, Savar Savar Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Savar
Zip Code:	1249
Audit Duration:	2 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	7/10/2014
Final Report Date :	7/10/2014
Are all action items from previous assessment complete? :	N/A
Buildings in Complex :	2 (Main Building, Washing Plant)
Is the building(s) owned or rented by the Factory? :	Owned
Number of Building Levels (Stories) :	Factory (main) building is 1 storied + a mezzanine floor (height 27 ft). Washing plant is 3 storied (height 37ft).
Approximate Building Area (SF) :	Total main factory building area 90,900 sft
Date of Building Construction :	Management informed that it was constructed in 1995.
Date of Last Building Renovation/Addition :	It was constructed in 1995. Then mezzanine floor is constructed 2002. Washing plants constructed in 2007.
Ancillary Structures in Complex :	5
Approximate Ancillary Structures Area (SF) :	Service Building (Generator/Substation) Warehouse Boiler Room (2) Security Houses
Number of Occupants :	2090

Factory Name: **FCI BD, Ltd.**

Address: **Plot-36-39 Dhaka EPZ, Ganakbari, Savar Savar Dhaka Bangladesh**

Assessor: **Sumerra**

Date: **01 Jun 2014**



ALLIANCE
FOR BANGLADESH WORKER SAFETY

Provide brief description of the electrical system for each building.:	Main buildings: Building 1 has the production area, management section, substation (named as MDB room) and warehouse 1 (main). Besides substation equipment, this building has production machinery, PABX system and distribution boards. Building 2 has washi
Physical location of Substation? :	The substation is on the ground floor in west part of main building 1. But the room is marked as "MDB room"
What equipment/loads does the UPS serve? :	IPS supplies power to emergency lighting, fire alarms and fire exit signage's. UPS serves PABX and internet.



ASSESSMENT FINDINGS

Electrical System Information

Question:	Are as-built electrical drawings indicating information such as panel and circuit locations throughout the building(s) available for review?
Priority Level:	High
Non-Compliance Level:	1
Description:	Factory has one-line diagram, but does not have equipment layout drawings or grounding layout drawings.
Source of Findings:	Document Review: No equipment layout or grounding riser diagrams available.
Suggested Plan of Action:	Have a qualified electrical engineer develop an as-built layouts detailing key components and capacity of the electrical system including equipment layout and grounding layout plan.
Suggested Deadline Date:	06 Sep 2014
Standard:	Alliance Standard Part 10 Section 10.3.7

Electrical System Maintenance

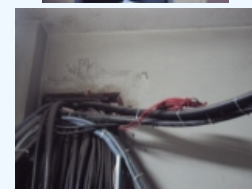
Question:	Have workers that operate and maintain the electrical system received electrical safety training? Is training documentation on site?
Priority Level:	High
Non-Compliance Level:	3
Description:	Operators and workers said they are trained but could not provide any document.
Source of Findings:	Document Review: No Documents are available.
Suggested Plan of Action:	Develop and implement an electrical safety program. Include key topics such as lock out tag out procedures, personal protective equipment requirements. Agenda, materials, and attendance should be documented and kept on file for review.
Suggested Deadline Date:	06 Sep 2014
Standard:	Reference NFPA 70e for example
Question:	Is a periodical Insulation Resistance Measurement Program established and recorded?
Priority Level:	Medium
Non-Compliance Level:	3



Description:	No Insulation Resistance Measurement Program established and recorded
Source of Findings:	Document Review: No records of insulation resistance measurement
Suggested Plan of Action:	Develop an Insulation Resistance Measurement Program that ensures deterioration of insulation resistance will be identified quickly. Testing should be in compliance with InterNational Electrical Testing Association (NETA). All transformers, switchgears etc. shall be subject to an insulation resistance measurement test to ground after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches etc. and between each phase and earth.
Suggested Deadline Date:	06 Sep 2014
Standard:	Alliance Standard Part 10 Section 10.13.4 Insulation Tests and 10.13.8 Electrical Inspections

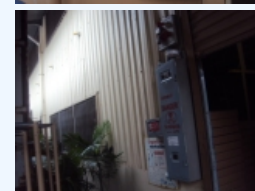
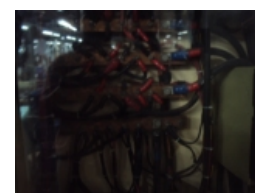
Electrical System Conditions

Question:	The substation room has the required fire rating/protection and is physically separated from the remainder of the building.
Priority Level:	High
Non-Compliance Level:	3
Description:	The room is inside the main factory building and is not enclosed in fire rated construction. Additionally the room is mislabelled as "MDB Room".
Source of Findings:	Photograph: Substation Room and penetrations observed.
Suggested Plan of Action:	Separate substation from remainder of building by minimum 2-hr fire-rated construction. Seal and/or protect all openings to maintain the required fire separation (e.g. 1.5 hour fire door assembly. Additionally, change label of room to accurately depict the use of the room.
Suggested Deadline Date:	06 Sep 2014
Standard:	Alliance Standard Part 3 Section 3.4.2.1.4
Question:	No multi looping of wiring/cables observed at circuit breakers within switchboards and/or distribution boards.
Priority Level:	High
Non-Compliance Level:	3





Description:	Multi looping was found in many SDBs in main building 1
Source of Findings:	Photograph: Photos of multi looping (Inside view of SDB 28 at PABX room , SDB 26 at east wall, SDB 24 at north-west corner of main building)
Suggested Plan of Action:	Remove multi looping of wiring/cables at the SDB's as noted.
Suggested Deadline Date:	06 Sep 2014
Standard:	Alliance Standard Part 10 Section 10.3 Electrical Wiring and Cabling
Question:	Wiring systems are selected and erected so that no damage is caused by the ingress of water.
Priority Level:	High
Non-Compliance Level:	1
Description:	Distribution boards and switchboards were there at the outer walls of both warehouse and exposed to rain and storm water and were not appropriately sealed against intrusion of moisture.
Source of Findings:	Photograph: Outdoor panel boards
Suggested Plan of Action:	Outdoor switchboards should be rated for outdoor applications. All openings must be completely sealed with glands or other methods. Panel boxes should be raintight.
Suggested Deadline Date:	06 Sep 2014
Standard:	Alliance Standards Part 10 Section 10.3.4.3 Presence of Water
Question:	Do switchboards and/or distribution boards have clear identification markings?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Some panels in generator and transformer rooms were not marked. Panel schedules were not provided on panels.
Source of Findings:	Photograph: Photo of a unmarked panel in generator room
Suggested Plan of Action:	All distribution boards shall be marked "Lighting" or "Power", as the case may be, provided a unique ID number (e.g. MDB-1) and also be marked with the voltage and number of phases of the supply. Each shall be provided with a circuit list giving diagram of each circuit which it controls and the current rating for the circuit and size of fuse element (panel schedule).
Suggested Deadline Date:	06 Sep 2014





Standard:	Alliance Standard Part 10 Section 10.7 BNBC Part 8 Section 2.11.5.4	
Question:	Do switchboards and/or distribution boards have capacity information labels?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Capacity information was not found on boards	
Source of Findings:	Photograph: Photo of SDB 27 in PABX room in main building 1	
Suggested Plan of Action:	Label all switchboards and/or distribution boards in the factory with capacity information. The permanent label should identify the maximum voltage present in an item of equipment or within the enclosure.	
Suggested Deadline Date:	06 Sep 2014	
Standard:	Alliance Standard Part 10 Section 10.7 Main Switch, Switchboards And Metal Clad Switchgear and 10.13.7 Inspection of the Installation	
Question:	The substation room is clean and free from dirt, lint, water, oil, and debris.	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	Combustible materials found in transformer room	
Source of Findings:	Photograph: Combustible materials in transformer room	
Suggested Plan of Action:	Remove combustible materials from transformer room.	
Suggested Deadline Date:	24 Jul 2014	
Standard:	Alliance Standard Part 13 Section 13.6.2	
Question:	Required equipment and safety signage is posted within the room.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	Safety signage was not present in sub station, generator, or transformer room. Additionally, some DB's in factory were missing warning labels	
Source of Findings:	Photograph: Photo of no signage on LT panel in sub station	
Suggested Plan of Action:	Indoor electrical installations that are accessible to unqualified persons shall be made with metal-enclosed equipment. Switchgear, unit substations, transformers, pull boxes, connection boxes, and other similar associated equipment shall be marked with appropriate caution signs. Entrances to rooms and other guarded locations that contain exposed live parts shall be marked with conspicuous warning	



	signs forbidding unqualified persons to enter.	
Suggested Deadline Date:	06 Sep 2014	
Standard:	Alliance Standard Part 10 Section 10.3.7, Section 10.7.3, and 10.13.7, NFPA 70 Chapter 1 Article 110.21, and Bangladesh Electricity Rules of 1937 Rule 46	
Question:	Phase separators are provided between terminals on circuit breakers.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	No phase separators were observed.	
Source of Findings:	Photograph: Photos of SDB board where phase separator is missing	
Suggested Plan of Action:	Install phase separators between all terminal connections between different phases for voltage exceeding 230 volts . Verify phase separators are installed at all remaining locations.	
Suggested Deadline Date:	06 Sep 2014	
Standard:	Alliance Standard Part 10 Section 10.3.1 Electrical Connections	
Question:	Signage indicating the prohibition of light fixtures without protective covers is installed at required locations.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	No signage indicating the prohibition of light fixtures without protective covers is installed.	
Source of Findings:	Visual Assessment: No signs observed.	
Suggested Plan of Action:	Light fixtures without protective covers (otherwise known as naked lights) shall not be allowed in storage areas or in any area where the Inspector of the Factories Rules (1.6.3.7) Part 53 disallows these fixtures. Install signs posted in Bengali and English, indicating this prohibition at all entrances to these areas.	
Suggested Deadline Date:	09 Aug 2014	
Standard:	Alliance Standards Part 10 Section 10.15 Naked Lights	