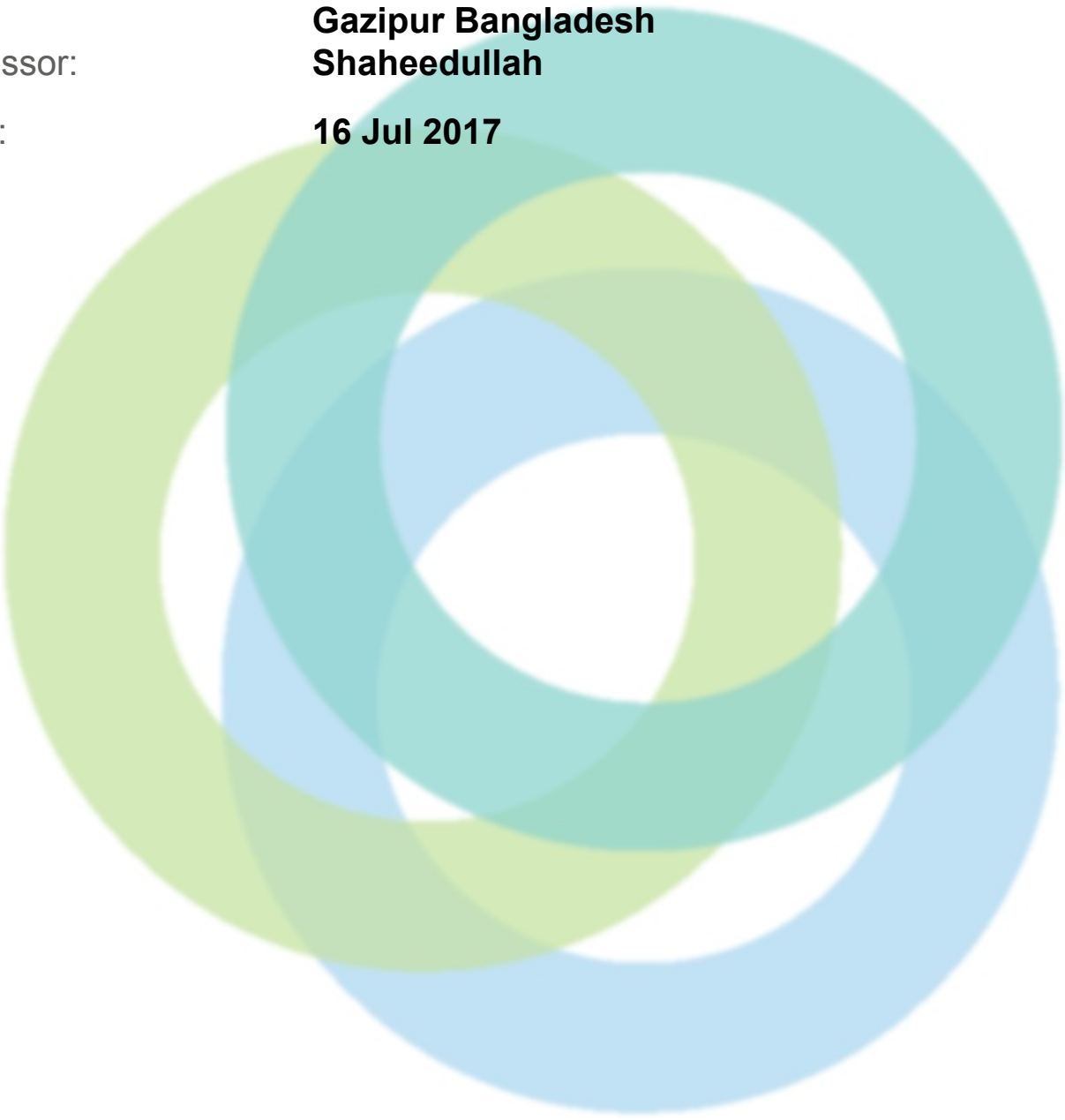


# INITIAL ELECTRICAL ASSESSMENT REPORT (EAR)

Factory Name: **Lyric Industries (Pvt.) Ltd**  
Address: **East Mouchak, Cha Bagan Road, Mouchak, Kaliakoir,  
Gazipur Bangladesh**  
Assessor: **Shaheedullah**  
Date: **16 Jul 2017**





## 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](http://www.bangladeshworkersafety.org).





## GENERAL INFORMATION

General Information	
Factory Name:	Lyric Industries (Pvt.) Ltd
Address:	East Mouchak, Cha Bagan Road, Mouchak, Kaliakoir, Gazipur Bangladesh
Country:	Bangladesh
Province:	
City:	Gazipur
Zip Code:	1751
Audit Duration:	3 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	16 July, 2017
Final Report Date :	27 July, 2017
Are all action items from previous assessment complete? :	N/A
Buildings in Complex :	1. Production Building: One (1) (5 Stories) 2. Ancillary Buildings: Six (6)
Is the building(s) owned or rented by the Factory?:	Owned
Number of Building Levels (Stories) :	Production Building: 5-stories above grade.
Approximate Building Area (SF) :	171,770 SF
Date of Building Construction :	2015-2016.
Date of Last Building Renovation/Addition :	N/A
Ancillary Structures in Complex :	6 Ancillary buildings are: a) Utility Building. b) Security and Fire control Room. c) Wastage Store building. d) Underground Pump House with Underground Reservoir. e) Shower Stand (Block 1&2). f) Sewage treatment Plant (STP) with underground tanks.
Approximate Ancillary Structures Area (SF) :	a) Utility Building: 2,160 SF (1-story), b) Security and Fire Control Room: 530 SF (1-story), c) Wastage Store building: 566 SF (1-story), d) Underground Pump House with Underground Reservoir: 500 SF (1-story), e) Shower Stand (Block 1&2): 300 SF (1 story), f) Sewage Treatment Plant (STP) with underground tanks: 1,030

Factory Name: **Lyric Industries (Pvt.) Ltd**  
Address: **East Mouchak, Cha Bagan Road, Mouchak, Kaliakoir, Gazipur Bangladesh**

Assessor: **Shaheedullah**

Date: **16 Jul 2017**



**ALLIANCE**  
FOR BANGLADESH WORKER SAFETY

	SF (1-story).
Number of Occupants :	737 persons
Provide brief description of the electrical system for each building.:	Service Line: REB. MDB: quantity, six (6). DB: quantity, one (1). SDB: quantity, forty-three (43). COS: quantity, one (1)(1500A). Transformer: quantity, one (1) (1600KVA). Generator: quantity, one (1)(800KVA). PFI: quantity, one (1) (960KVAR). LT Panel: quantity, one (1). Lift: quantity, zero (0) Fuel Tank Capacity: 4500ltr.
Physical location of Substation? :	Outside of main building.
What equipment/loads does the UPS serve? :	Emergency lighting, exit lights, FACP, etc.



## 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:	2
Description:	As-built drawing not available at site.
Source of Findings:	Photograph: As built drawing not available.
Suggested Plan of Action:	Have a qualified electrical engineer develop as-built drawings detailing key components and capacity of the electrical system in accordance with Alliance requirements.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standard Part 10 Section 10.3.7



### Electrical System Maintenance

Question:	Have items identified in previous thermographic inspection reports been addressed?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Previous thermographic inspection reports have not been addressed.
Source of Findings:	Photograph: Previous thermographic inspection reports have not been addressed.
Suggested Plan of Action:	Complete action items identified from previous thermographic inspection report.
Suggested Deadline Date:	30 Sep 2017
Standard:	Not Applicable





Question:	Transformers do not contain harmful substances such as PCBs.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	No testing documentation was provided during inspection.
Source of Findings:	Photograph: No document was found.
Suggested Plan of Action:	Conduct a complete oil analysis to determine the content of PCBs in transformer oil and consider replacing transformers found with harmful substances to reduce health hazards.
Suggested Deadline Date:	30 Sep 2017
Standard:	Not Applicable
Question:	Are periodic safety inspections of the electrical system components completed and documented?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Periodic safety inspections of the electrical system components are not documented.
Source of Findings:	Document Review: No documentation was found.
Suggested Plan of Action:	Establish a periodic inspection program to ensure the electrical systems are free from damage, debris, dirt, lint, etc. Maintain records concerning inspections and follow up actions.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standard Part 10 Section 10.13 Inspection and Testing and Part 13 Section 13.6 Housekeeping
Question:	Is a periodical Insulation Resistance Measurement Program established and recorded?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Insulation Resistance Measurement test program is not established or recorded.
Source of Findings:	Photograph: IR test program was not established or recorded.
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





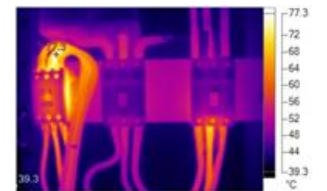
	transformers, switchgears etc. shall be subject to an insulation resistance measurement test to ground after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches etc. and between each phase and earth.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standard Part 10 Section 10.13.4 Insulation Tests and 10.13.8 Electrical Inspections

### Electrical System Conditions

Question:	All equipment is efficiently earthed and properly connected to the required number of earth electrodes.
Priority Level:	High
Non-Compliance Level:	3
Description:	All equipment is not efficiently earthed or properly connected to the required number of earth electrodes. Location: All panel boards.
Source of Findings:	Photograph: All equipment is not efficiently earthed.
Suggested Plan of Action:	Provide earthing of equipment at required locations and connect to required number of electrodes. Refer to the BNBC for required number of electrodes.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standard Part 10 Section 10.13.7.1 Inspection of Substation Installations.



Question:	Indications of overheating, overloading, or signs of burning were not observed.
Priority Level:	High
Non-Compliance Level:	3
Description:	Indications of overheating were observed at SDB-01/ Ex.Fan.
Source of Findings:	Photograph: Indications of overheating.
Suggested Plan of Action:	Consult with a qualified electrical engineer to determine the cause of overheating, overloading, or signs of burning and take proper action.
Suggested Deadline Date:	07 Aug 2017
Standard:	Alliance Standard Part 10 Section 10.3.5





Question:	Do switchboards and/or distribution boards have a minimum clearance of 1 m (39 in) in front?
Priority Level:	High
Non-Compliance Level:	1
Description:	Switchboards and/or distribution boards do not have a minimum clearance of 1 m (39 in) in front. Location: SDB-01/Light/MDB Room.
Source of Findings:	Photograph: No minimum clearance.
Suggested Plan of Action:	Provide minimum clearance of 1 m (39 in) in front of all panel boards, switchboard and distribution boards in accordance with the Alliance requirement.
Suggested Deadline Date:	16 Sep 2017
Standard:	Alliance Standards Part 10 Section 10.7 Main Switch, Switchboards and Metal Clad Switchgear
Question:	No multi looping of wiring/cables observed at circuit breakers within switchboards and/or distribution boards.
Priority Level:	High
Non-Compliance Level:	1
Description:	Multi looping of cables was observed at busbar within switchboards. Location: SDB-01/Power.
Source of Findings:	Photograph: Multi looping of cables are observed.
Suggested Plan of Action:	Survey all distribution boards to identify all locations of multi looping of cables. Remove multi looping of wiring/cables at circuit breakers within switchboards and/or distribution boards. Make separate connection from bus bar for individual circuits.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standard Part 10 Section 10.3 Electrical Wiring and Cabling
Question:	The substation room has adequate ventilation.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	The substation room does not have adequate ventilation.
Source of Findings:	Photograph: Substation room does not have adequate ventilation.
Suggested Plan of Action:	Provide means of ventilation for the substation room. Consult a qualified electrical engineer to determine the required ventilation rates based on the







	installed equipment.	
Suggested Deadline Date:	30 Sep 2017	
Standard:	Alliance Standard Part 10 Section 10.13.7.1 Inspection of Substation Installations.	
Question:	Are all internal components of switchboards and/or distribution boards properly concealed (No missing circuit breaker or knockout covers)?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Internal components of distribution boards are not properly concealed. Location: All Panel boards.	
Source of Findings:	Photograph: Internal components of DB are not properly concealed.	
Suggested Plan of Action:	Provide covers or blanks to conceal all live internal components of switchboards and/or distribution boards.	
Suggested Deadline Date:	31 Aug 2017	
Standard:	Alliance Standard Part 10 Section 10.3.9 Sub-Distribution Boards	
Question:	Do switchboards and/or distribution boards have capacity information labels?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Distribution boards do not have capacity information labels. Location: All panel boards.	
Source of Findings:	Photograph: No capacity information labels in DBs.	
Suggested Plan of Action:	Provide capacity information labels (Maximum current rating, number of circuit breakers, rated capacity of circuit breaker, etc.) for Switchboards and/or distribution boards. Display panel schedule on panel door (inner side) printed on a sheet made of non-combustible material.	
Suggested Deadline Date:	30 Sep 2017	
Standard:	Alliance Standard Part 10 Section 10.7 Main Switch, Switchboards And Metal Clad Switchgear and 10.13.7 Inspection of the Installation	



Question:	Are switchboards and/or distribution boards provided with physical means to prevent the installation of more over current devices than that number for which the panel board was designed, rated, and listed.
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Distribution boards are not provided with a physical means to prevent the installation of more over current devices than that number for which the panel board was designed, rated and listed. Location: All panel boards.
Source of Findings:	Photograph: No physical means for DBs.
Suggested Plan of Action:	Verify the existing load does not exceed the panel rating. For switch boards and/or distribution boards, provide the physical means to prevent the installation of more over current devices than that number for which the panel board was designed, rated, and listed following NFPA 70 section 408.54.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standards Part 10 Section 10.7 Main Switch, Switchboards and Metal Clad Switchgear
Question:	Are electrical wiring/cables properly identified?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Electrical wiring/cables are not properly identified. Location: All panel boards.
Source of Findings:	Photograph: No identification for Electrical wiring/cable.
Suggested Plan of Action:	Provide identification of wires/cables by separate color coding, marking tape, tagging, or other approved means.
Suggested Deadline Date:	30 Sep 2017
Standard:	Bangladesh Electricity Rules 1937 Rule 51 and 56
Question:	Are junction boxes and other electrical devices provided with covers?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Cable trays are not provided with covers.
Source of Findings:	Photograph: No cover for the cable trays.
Suggested Plan of Action:	Provide adequate covers for junction boxes and other electrical devices according to Alliance Standard.





Suggested Deadline Date:	31 Aug 2017	
Standard:	Alliance Standard Part 10 Section 10.3.5 and 13.6.2	
Question:	Mechanical guards are provided for electrical equipment and wiring where necessary.	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	Mechanical guards are not provided for electrical equipment and wiring where necessary. Location: Substation room.	
Source of Findings:	Photograph: No Mechanical guards.	
Suggested Plan of Action:	Survey all locations to identify missing mechanical guards. Provide mechanical guards for electrical equipment where necessary.	
Suggested Deadline Date:	31 Aug 2017	
Standard:	Alliance Standard Part 10 Section 10.3 Electrical Wiring and Cabling, 10.6.5 Cables, and 10.7 Main Switch, Switchboards And Metal Clad Switchgear	
Question:	Signage indicating the prohibition of light fixtures without protective covers is installed at required locations.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	Signage indicating the prohibition of light fixtures without protective covers is not installed at required locations.	
Source of Findings:	Photograph: Signage indicating the prohibition of light fixtures without protective covers is not installed at required locations.	
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:	31 Aug 2017	
Standard:	Alliance Standards Part 10 Section 10.15 Naked Lights	



Question:	Phase separators are provided between terminals on circuit breakers.
Priority Level:	Low
Non-Compliance Level:	1
Description:	Phase separators are not provided between terminals on circuit breakers. Location: MDB/Utility.
Source of Findings:	Photograph: Phase separators are not provided.
Suggested Plan of Action:	Install phase separators between terminal connections. Verify phase separators are installed at all remaining locations.
Suggested Deadline Date:	30 Sep 2017
Standard:	Alliance Standard Part 10 Section 10.3.1 Electrical Connections

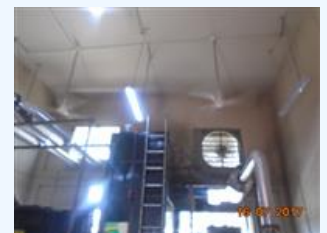


**Emergency Power System**




Question:	Fuel storage tanks located within the building have a maximum combined capacity of 2500L (660 gal) or less.
Priority Level:	High
Non-Compliance Level:	3
Description:	Fuel storage tank within generator room is greater than 2500 L.
Source of Findings:	Photograph: Fuel storage tank capacity is greater than 2500 L.
Suggested Plan of Action:	Resize fuel tank capacity in accordance with the Alliance standard. Fuel tanks capacity should be resized less than 2500L.
Suggested Deadline Date:	31 Aug 2017
Standard:	Alliance Standards Part 3 Section 3.4.2.1.3 Generators



Question:	Is the generator room properly ventilated
Priority Level:	High
Non-Compliance Level:	1
Description:	The generator is not room properly ventilated.
Source of Findings:	Photograph: No ventilation system.
Suggested Plan of Action:	Provide adequate ventilation for the generator room.
Suggested Deadline Date:	16 Sep 2017





Standard:	Alliance Standards Part 10 Section 10.8.4 Generator Room	
Question:	Are cable trenches properly covered?	
Priority Level:	High	
Non-Compliance Level:	1	
Description:	Cable trenches are not properly covered. Location: Substation room.	
Source of Findings:	Photograph: Cover are not provide on cable trenches.	
Suggested Plan of Action:	Provide non-combustible cover for cable trenches.	
Suggested Deadline Date:	16 Sep 2017	
Standard:	Alliance Standard Part 10 Section 10.13.7 Inspection of the Installation	
Question:	Is the generator frame earthing (grounding) provided at two separate points?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Generator frame earthing (grounding) is not provided at two separate points.	
Source of Findings:	Photograph: Generator frame earthing.	
Suggested Plan of Action:	Provide generator frame earthing at two separate points with proper size of conductors and sufficient number of earth electrodes.	
Suggested Deadline Date:	16 Sep 2017	
Standard:	Alliance Standard 10.8.2.2	
Question:	Are inspection, maintenance, and testing procedures of the emergency generator being completed and documented?	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	Inspection, maintenance, and testing procedures for the emergency generator are being documented, but not in Accordance with all requirements.	
Source of Findings:	Document Review: No proper document was found.	
Suggested Plan of Action:	Establish a routine maintenance and testing program for the emergency generator. The program shall be based on all of the following: (1) Manufacturer's recommendations (2) Manufacturer's Instruction manuals (3) Requirements of NFPA 110 Chapter 8	
Suggested Deadline	30 Sep 2017	



Date:	
Standard:	NFPA 110 Chapter 8

**Lightning Protection System**

Question:	Is a lightning protection system installed on the building?
Priority Level:	High
Non-Compliance Level:	1
Description:	Lightning Protection System (LPS) has been installed on the building. But not reviewed from Alliance.
Source of Findings:	Photograph: Lightning protection system has been installed on the building.
Suggested Plan of Action:	Have a qualified electrical engineer evaluate, and provide as-built drawings of the LPS in accordance with BNBC requirements. Have a licensed electrician modify the system as necessary per the electrical engineers drawings and provide LPS drawings to Alliance for review.
Suggested Deadline Date:	31 Oct 2017
Standard:	Alliance Standards Part 10 Section 10.11 Lightning Protection. Calculate Risk Index to determine if required.

