INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name:	**SQ Birichina Limited**
Address:	**SQ Station, Plot # 221-223, Jamirdia, Valuka, Mymensingh Mymensingh Dhaka Bangladesh**
Assessor:	**Bureau Veritas**
Date:	**17 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.

GENERAL INFORMATION

General Information	
Factory Name:	SQ Birichina Limited
Address:	SQ Station, Plot # 221-223, Jamirdia, Valuka, Mymensingh Mymensingh Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Mymensingh
Zip Code:	2242
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	07-05-2014
Final Report Date :	08-25-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	1 Main Building 2 Ancillary Buildings
Number of Building Levels (Stories) :	7 (Ground + 6)
Approximate Building Area (SF) :	277144 sft
Date of Building Construction :	1) Main Building: 2007 2) Canteen building: Construction ongoing. 3) Utility building: 2007.
Date of Last Building Renovation/Addition :	1) Seven story RCC main production building : Renovation ongoing at front side. 2) Four story RCC canteen building (Under construction): Construction ongoing.
Is the Building mixed use?:	No
Ancillary Structures in Complex :	1) Canteen building (Under construction) 2) Utility building.
Number of Ancillary Levels (Stories) :	1) Canteen building (Under construction): 4 (grade + 3) (only grade + 1 complete) 2) Utility building: 1
Approximate Ancillary	1) Canteen building (Under construction): 16960 sft (Ground floor: 16960.00 sft, 1st to 3rd floor: Under

Structures Area (SF) :	construction) 2) Utility building: 8490.00 sft.
Number of Occupants :	4785
Exterior Facade Description :	The building is RCC frame structure with infilled masonry wall. Exterior face of the masonry wall is of plaster and paint works. Some exposed masonry walls are observed at 5th and 6th floor. The main door of the building is a fireproofed metal door and the windows are of sliding glass type.
Structural System Description :	This building is monolithic RCC flat slab system. There is a PEB steel shed at 6th floor. Foundation is isolated column footing.

ASSESSMENT FINDINGS

Structural System Design		
Question:	Has evidence of structural integrity been provided using a Preliminary Structural Assessment?	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	There is a third party assessment report available. Assessment was done by "AUSPICIOUS" and is dated 05/05/2014. The assessment report concluded the following: 1. Column: C2 column is overstressed, so further analysis and treatment required. 2. Beam: All Edge Beams are safe. 3. Footing: Some footings are overstressed, so further analysis and treatment required. 4.0 Slab: All flat Slabs are safe.	
Source of Findings:	Document Review: Document review reveals that, there is a third party assessment report available. Assessment have been done by "AUSPICIOUS" on dated 05/05/2014. The assessment report have been concluded as below: 1. Column: C2 column is in Overstress, so further analysis and treatment required. 2. Beam: All Edge Beam are safe. 3. Footing: Some footings are in Overstress, so further analysis and treatment required. 4.0 Slab: All flat Slabs are safe.	
Suggested Plan of Action:	Engage a qualified Structural Engineer for further analysis to determine the necessary remedial measures.	
Suggested Deadline Date:	30 Sep 2014	
Standard:	Reference Alliance Standards Part 8 Section 8.2 Structural Integrity of Existing Factory Buildings	
Question:	Are credible structural design documents available for review and kept on site?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	There is a set of design document available for review and kept on site. Design report is available but not as per BNBC 2006, sec 1.9.1.1	
Source of Findings:	Document Review: Document review reveals that there is a set of design document available for review and kept on site. Design report is available but not as per BNBC 2006, sec 1.9.1.1	
Suggested Plan of Action:	Have a qualified Structural Engineer prepare the design report as per BNBC 2006, sec 1.9.1.1 and submit to BV for review.	
Suggested Deadline Date:	30 Sep 2014	

Standard:	Alliance Standard Part 8 Section 8.19 Required Structural Documentation for New and Existing Factories	
Question:	Is a clear and redundant load path to resist lateral loads provided?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The structure is a flat slab system and hence the lateral load system is not apparent and the redundancy is not known.	
Source of Findings:	Visual Assessment: Document review reveals that,the structure is a flat slab system and hence the lateral load system is not apparent and the redundancy is not known.	
Suggested Plan of Action:	Have a qualified structural engineer complete further analysis of the structure and develop a remediation plan if required.	
Suggested Deadline Date:	30 Sep 2014	
Standard:	Alliance Standards Part 8 Section 8.17 Design for Lateral Loads and 8.3.3. 2006 BNBC Part 6 Section 1.5	
Question:	Are Certificates of Occupancy available for review?	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	The factory has not obtained the Certificate of Occupancy from the authority.	
Source of Findings:	Document Review: The document review shows that the factory has not obtained the Certificate of Occupancy from the authority.	
Suggested Plan of Action:	Apply for issuance of Certificate of Occupancy and pursue the matter to obtain the same.	
Suggested Deadline Date:	30 Sep 2014	
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment	
Structural System Construction		
Question:	Are all non-structural elements suspended from, attached to, or resting atop the structure adequately anchored and braced to resist earthquake forces?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	There are racks at the 1st floor which are not braced for earthquake force.	
Source of Findings:	Visual Assessment: Visual inspection shows that, there are racks at 1st floor	

	which are not braced for earthquake force.
Suggested Plan of Action:	Adequately anchor and brace all non-structural elements to resist earthquake forces to comply with the BNBC and Alliance Standard.
Suggested Deadline Date:	30 Sep 2014
Standard:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6
Question:	If the building is currently being renovated or expanded, are the Construction Practices and Safety requirements of Section 9 being followed?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Seven story RCC main production building: Renovation is ongoing at the front side Four story RCC canteen building (Under construction): Construction ongoing. During our observation of the renovation, PPE (Personal Protective Equipment) was not being used among the workers. Additionally, a safety shed was not provided.
Source of Findings:	Visual Assessment: Visual observation shows that PPE is not being used among the workers, and a safety shed has not been provided.
Suggested Plan of Action:	Construction Practices and Safety requirements of Section 9 should be followed during the renovation.
Suggested Deadline Date:	30 Sep 2014
Standard:	Alliance Standard Part 9 Construction Practices and Safety.
Question:	Have all areas of needed maintenance, including areas with efflorescence, dampness, standing water on rooftops, and corrosion been addressed.
Priority Level:	Medium
Non-Compliance Level:	1
Description:	Dampness found on masonry walls of 3rd floor due to water ingress. There is no maintenance program for all areas including areas with efflorescence, dampness, standing water on rooftops, and corrosion.
Source of Findings:	Visual Assessment: Visual inspection shows that, dampness is available on masonry walls of 3rd floor. There is no maintenance program for all areas including areas with efflorescence, dampness, standing water on rooftops, and corrosion.
Suggested Plan of Action:	Under guidance from a qualified structural engineer, address all areas of needed maintenance by correcting the identified issues.
Suggested Deadline Date:	30 Sep 2014

Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	
Question:	Is the building free of active signs of water intrusion or ponding due to lack of performance of the façade system?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Moisture intrusion at the facade appears to be causing dampness at the interior of the structure.	
Source of Findings:	Visual Assessment: Visually, dampness has been observed at facade.	
Suggested Plan of Action:	Repair the exterior façade system to prevent water intrusion.	
Suggested Deadline Date:	23 Oct 2014	
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	
Structural Safety Programs		
Question:	Is a program in place to ensure that the live loads for which a floor or roof is or has been designed will not be exceeded?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	There is no program that will ensure that the designated load in each floor will not be exceeded.	
Source of Findings:	Document Review: Document review shows that,no evidence of existence of any program to control the live load on the floor as per the floor load plan.	
Suggested Plan of Action:	Develop a program to ensure that all live loads for which a floor or roof has been designed for will not be exceeded. The designated Load Manager shall oversee this program and ensure it is enforced.	
Suggested Deadline Date:	30 Sep 2014	
Standard:	Alliance Standard Part 13 Section 13.7 and Part 8 Section 8.9.	
Question:	Are areas used for storage of work materials and work products, clearly marked to indicate the acceptable loading limits as described in the Load Plan for that floor?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	There is a load plan, however no marking on the floor is available to designate spaces and height for storage of work materials.	

Source of Findings:	Visual Assessment: Visual inspection shows that, there is load plan however no marking on the floor is available to designate spaces and height for storage of work materials.
Suggested Plan of Action:	Have a qualified structural engineer prepare a load plan for each floor and have the floors marked for designating storage area as per the developed load plan
Suggested Deadline Date:	30 Sep 2014
Standard:	Alliance Standard Part 8 Section 8.11 Floor Load Markings