

# INITIAL FIRE SAFETY INSPECTION REPORT

**SQ Birichina Ltd Unit 2 - Extension (previously SQ Colblanc Limited)**

**RSC ID: 25621**

**Jamirdia, Valuka, Mymensingh**

**Co-ordinate: 24.284043, 90.392591**

**Other Factories:** SQ Birichina Ltd (9538), SQ Celsius Ltd.(Auto) (11532), Birichina Ltd Unit 2 (previously SQ Colblanc Limited) [ID-12229], SQ Celsius Limited (Unit 2) (23352), SQ Celsius Ltd. (Unit 3) (24741)



**Inspected By: Md. Rakibul Islam**

**Date: 31-Oct-2024**

# **Fire Safety Inspection Report**

## **SQ Birichina Ltd Unit 2 - Extension (previously SQ Colblanc Limited)**

### **Introduction:**

**SQ Birichina Ltd Unit 2 - Extension (previously SQ Colblanc Limited)** complex was surveyed for fire safety on **31-Oct-2024** by The RSC Inspection Team. The purpose of the survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the RSC. The scope of this initial fire safety inspection was limited to the review and identification of major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

### **Limitations**

The information in this fire safety inspection report was obtained during a visit to the facility and during interviews with local factory management. It has not been possible to provide independent verification for all the information and data collected, and, therefore, The RSC cannot accept general responsibility for omissions or errors arising from inaccuracies in this report from the information obtained.

The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations as stated in this report will eliminate all hazards, risks or exposures or that hazards, risks or exposures not referred to in this report do not exist. Compliance with the findings and recommendations stated in this report does not relieve the factory owner from obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

## General Factory Information

**Factory Building name(s):** SQ Birichina Ltd Unit 2 - Extension (previously SQ Colblanc Limited) comprises one structure: A two-story Office Building. SQ Birichina Ltd Unit 2 - Extension (ID-25621) and SQ Birichina Ltd Unit 2 (previously SQ Colblanc Limited) [ID- 12229] shared same stairs and exit. Both of them are in single fire compartment. The building is as below:

| SI No | Building Name & Description                                                         | Construction History                                                                                                                                                               | Period  |
|-------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1     | <b>Office Building:</b> 2 storied (G+1) RCC building<br>Total Approx Area: 6500 Sft | Construction Start: January, 2021<br>Construction End: January, 2022<br>Date of first Operation: June, 2022<br>Building Approval: 12 May 2022 from LGED and 22 June 2023 from DIFE | Interim |

## Findings & Recommendations :

Table 1 summarize the fire safety non-compliant issues identified during the inspection. Recommendations have been provided to address each issue with specific remediation timeline. An implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for review.

**Table-1: For Extended Office Building**

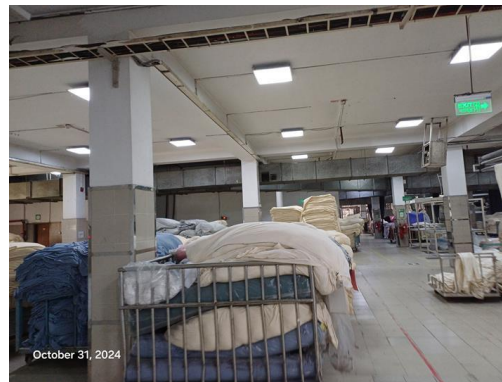
| SI No. | Category        | Findings                                                                                                                                                                                                                                                                                             | Required Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Remediation Time Frame |
|--------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-1    | Means of Egress | <p>The south-west exit stairs are not separated from work areas and other spaces on each floor by fire rated construction at extended office building.</p> <p>Newly installed fire doors (south-west) manual and certificate need to be kept on-site. Fire doors should be interfaced with FACP.</p> | <p>Provide minimum 1-hr rated doors for buildings with 3 or fewer stories and 1.5-hr fire rated doors for buildings that are 4 or more stories. Seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels.</p> <p>Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. Provide credible documents and certificates for fire rated doors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.</p> | Within 3 months        |



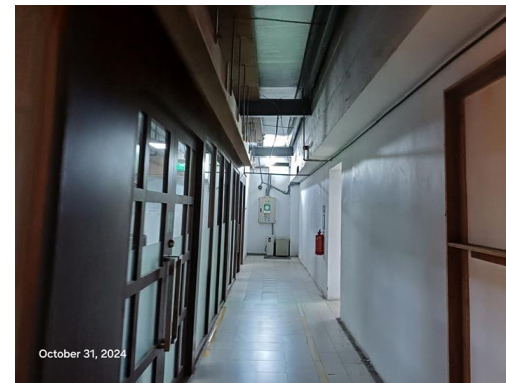
| SI No. | Category                | Findings                                                                | Required Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Remediation Time Frame |
|--------|-------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-2    | Fire Rated Construction | Elevator shafts are directly open into south-west exit stair enclosure. | Modify the elevator shaft as per RSC Technical Guideline (Standard) V1-6.14.3. An exit stairway shall not be built around a lift shaft unless both of them are located in a smoke proof enclosure and made of a material with fire resistance rating required for the type of construction of smoke proof enclosure. So, rearrange the facility to provide separate enclosure for lifts. If not possible anyway then provide a minimum 2-hr fire- rated elevator shaft with listed fire rated lift landing door to separate from each floor level.) | Within 3 months        |



| SI No. | Category                | Findings                                                                                             | Required Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Remediation Time Frame |
|--------|-------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-3    | Fire Rated Construction | Areas used for combustible storage are not separated by fire rated construction on the ground floor. | <p>Separate the dedicated storage rooms by minimum 1-hr fire-rated construction. Provide 0.75 hr. fire rated door and seal all penetrations and openings by 0.75 hr. (45 Minutes) fire rated fire rated barrier construction.</p> <p>Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> <li>- Maximum height of 2.45m (8ft.) , maximum area of 23m<sup>2</sup> (250 ft<sup>2</sup>) and 3m (10ft.) clear distance from adjacent another unenclosed combustible storage.</li> <li>- If the building/floor is sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m<sup>2</sup> (1000 ft<sup>2</sup>).</li> <li>-In process storage shall be limited to 10 percent of the building area of the story in which they occur.</li> </ul> | Within 3 months        |



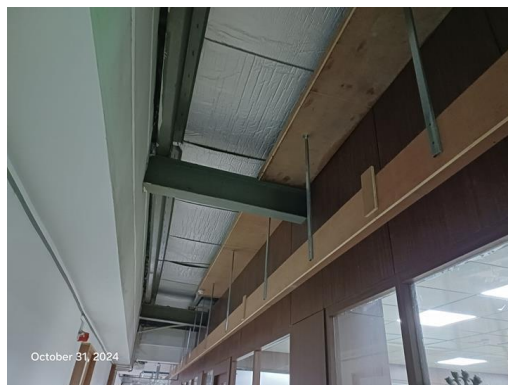
| SI No. | Category                | Findings                                                                | Required Action                                                                                                                                                                                                                                                                                                                              | Remediation Time Frame |
|--------|-------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-4    | Fire Rated Construction | Office area located at 1st floor is not separated from winding section. | <p>Ensure the office area fire separated by minimum 3-hr fire rated construction barrier with only occupancies with G and H following table 3.2.1 of BNBC-2006.</p> <p>Or, ensure that the office area is incidental to adjacent winding section having an area less than 10% in accordance to section 3.4.2 of RSC Technical Guideline.</p> | Within 3 months        |



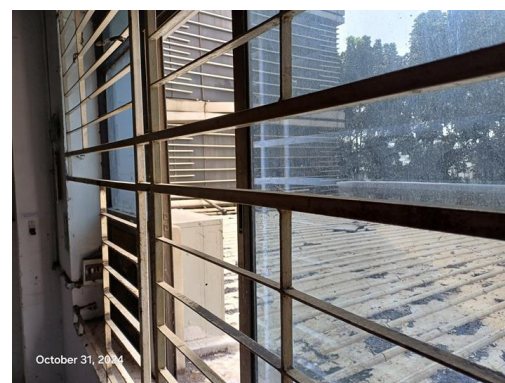
| SI No. | Category                | Findings                                                                                                                                                                | Required Action                                                                                                                                                                                                                                                                                                                                                                                                                              | Remediation Time Frame |
|--------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-5    | Fire Rated Construction | Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies due to expansion joint located at 1st floor slab of extended office building. | <p>Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor level or seal all penetrations and openings in floors/ceiling assemblies by 3-hr fire rated listed/certified materials. The installation of such fire rated materials shall be following certified design.</p> <p>Submit the proposed drawing/design to RSC for review. Once reviewed, install passive fire protection as per reviewed design.</p> | Within 3 months        |



| SI No. | Category                | Findings                                                                                                                                                                                                                  | Required Action                                                                                                                                                                                                             | Remediation Time Frame                                               |
|--------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| F-6    | Fire Rated Construction | The main structural elements (Rafter & Purlin on 1st floor roof) of the building are constructed by steel which is non-rated and were found in exposed condition without any fire protection. <b>(Interim Structure).</b> | Assess the steel part of building as per BNBC-2020. Submit the design philosophy and drawing and design to RSC for review. Once reviewed, according to requirement, install passive fire protection as per reviewed design. | Design within 2 months, installation/modification on within 4 months |



| SI No. | Category                | Findings                                                                                                                                                                                                    | Required Action                                                                                                                                                                                                                                                                      | Remediation Time Frame |
|--------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-7    | Fire Rated Construction | Floor to floor separation is not ensured as the extended office building has non-rated structure on 1st floor roof and 6 storied production building has openings without any fire protection on 2nd floor. | Provide a minimum 3-hr fire resistance rating in floors/ceiling assemblies by applying listed/certified materials. The installation of such fire rated materials shall be following certified design. Or, seal the opening adjacent to shed on 2nd floor by fire rated construction. | Within 3 months        |



| SI No. | Category        | Findings                                                                                                                    | Required Action                                                                                                                                                                                                                                                                                                                    | Remediation Time Frame |
|--------|-----------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-8    | Means of egress | Egress doors and gates with locking features are provided at office rooms located at 1st floor of extended office building. | <p>Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and RSC standard 6.8.2.</p> <p>Or, integrate the locking devices with FACP in such a way that upon triggering alarm all door locking mechanism released.</p> | Within 1 month         |



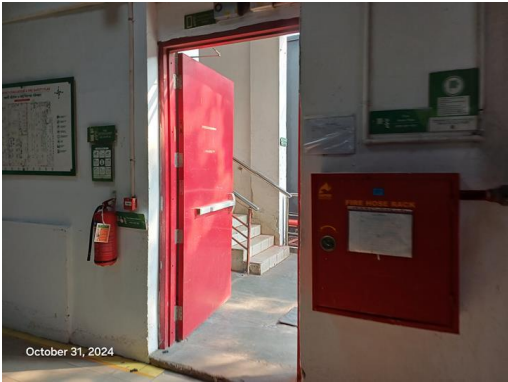
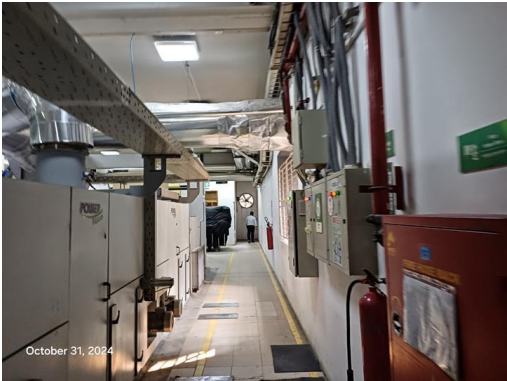
| SI No. | Category           | Findings                                                                                                                                                                                                                                   | Required Action                                                                                                                                                                                                                                                                                                     | Remediation Time Frame |
|--------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| F-9    | Emergency Lighting | Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes and at exit stairs on all floors.<br>Location: Corridor of office on 1st floor, aisles on ground floor | Test the emergency lighting system on each floor and provide additional emergency fixtures to supply adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and along exit discharge paths and a minimum 2.5 lux along exit access aisles. | Within 1 month         |



| SI No. | Category                             | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Required Action                                                                                                                                                                                                                                                                                                                                                                                    | Remediation Time Frame                                               |
|--------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| F-10   | Inspection, testing, and maintenance | Inspection, testing, and maintenance for the exit sign and emergency lighting system is not in accordance with the RSC Technical Guidelines (Standard)                                                                                                                                                                                                                                                                                                                          | Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.                                                                                                                                                                                                                                                      | Within 1 month.                                                      |
| F-11   | Inspection, testing, and maintenance | Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.                                                                                                                                                                                                                                                                                                                                                                           | Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and RSC standards.                                                                                                                                                                                                                                                          | Within 1 month                                                       |
| F-12   | Fire Alarm & Detection System (FADS) | SQ Birichina Ltd Unit 2 - Extension [ID-25621] and SQ Birichina Ltd Unit 2 (previously SQ Colblanc Limited) [ID- 12229] are in single fire compartment. All the buildings have been provided with addressable fire alarm and detection system. In extension office building centralized fire alarm and detection system (FACP- "KENTEC", Loop-6 used for extension office building) installation work is almost in finished level which required details review & verification. | Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval. Modification (if required) shall have to done as per the reviewed design and NFPA- 72. Upon approval & modification (if required) the factory shall inform RSC to conduct final testing and commissioning verification of the system for final acceptance. | Design within 2 months, installation/modification on within 4 months |

| SI No. | Category                             | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Required Action                                                                                                                                                                                                                                                                                                                                                                                                                | Remediation Time Frame                                               |
|--------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
|        |                                      |                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                      |
| F-13   | Inspection, testing, and maintenance | Inspection, testing and maintenance of the addressable fire alarm and detection system is not in accordance with NFPA 72, 25 and the RSC Technical Guidelines (Standard).                                                                                                                                                                                                                                                                                           | Inspect, test and maintain the addressable fire alarm and detection system and keep written records on- site, in accordance with NFPA 72 ,25 and the RSC Technical Guidelines (Standard)                                                                                                                                                                                                                                       | 1 month after installation                                           |
| F-14   | Fire Protection System               | <p>Height of the highest occupied floor level of the extended office building is 4.57 m (15.0 feet). But, SQ Birichina Ltd Unit 2 - Extension [ID-25621] and SQ Birichina Ltd Unit 2 (previously SQ Colblanc Limited) [ID- 12229] are in single fire compartment. and height of occupied floor of 6 storied main production building is more than 10.0m.</p> <p>According to the height of the highest occupiable floor class III standpipe system is required.</p> | <p>Submit the as-built standpipe system, fire pump and water supply system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC standard and NFPA 14,20,22 and 24.</p> <p>After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system, fire pump and water supply system.</p> | Design within 2 months, installation/modification on within 4 months |

| SI No. | Category | Findings | Required Action | Remediation Time Frame |
|--------|----------|----------|-----------------|------------------------|
|--------|----------|----------|-----------------|------------------------|



| SI No. | Category                                                     | Findings                                                                                                                       | Required Action                                                                                                                                            | Remediation Time Frame             |
|--------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| F-15   | Fire Protection System(ITM of Standpipe)                     | Inspection, testing, and maintenance for the standpipe system is not in accordance with NFPA 13 and 25 or as per RSC standard. | Inspect, test and maintain the fire pump and standpipe system, and keep written records on-site, in accordance with NFPA 14 and 25 or as per RSC standard. | Within 1 Month after installation. |
| F-16   | Inspection, testing, and maintenance of the Fire Pump (ITM). | Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.                                 | Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 25.                                              | Within 1 Month after installation. |