

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: ANANTA CASUALWEAR LTD
Address of the Factory	: Kunia, Targachi, K.B Bazar, Gazipur, Dhaka, Bangladesh
Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Alliance
Date of Structural Inspection	: 01-Jun-2014
Fire & Electrical assessment conducted by	: Alliance
Date of Fire & Electrical Inspection	: 22-Jul-2014 & 25-Jun-2014
BGMEA Membership No	: 1181

BASIC INFORMATION:

There are 02 main buildings. The following general information was noted:

- i. Building Usage Type : Garments Factory
- ii. Structural System : Building#1 is RCC Frame system & Building#2 is Steel frame shed
- iii. Floor System : Building 1-beam slab, Building 2-purling-GI sheet system
- iv. Floor Area : 126,000 Sft
- v. No. of Stories : 06 Storied RCC and Single Story Shed
- vi. Construction Year : 1993 (Building#1)
- vii. Foundation Type : Isolated footing
- viii. Design Drawings : Available
- ix. Soil investigation Report : Available
- x. Construction Materials : RC, steel
- xi. Generator : Information Not Available

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for Structural, Fire and Electrical Safety comprises of Short Term, Mid Term and Long Term basis are as follows:

The recommendations for Structural Safety corrective actions are:

Immediate : NA

Short Term: (3 Weeks) :

- i. "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 over see this program and ensure it is enforced."
- ii. Designate a representative as the Factory Load Manager. The Factory Owner shall ensure that at least one individual, the Factory Load Manager who is located onsite full time at the factory, is trained in calculating operational load characteristics of the specific factory. The Factory Load Manager shall serve as an ongoing resource to RMG vendors and be responsible to ensure that the factory operational loads do not at any time exceed the factory floor load limits as described on the Floor Load Plans.

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Mid Term (6 Weeks)

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- i. Engage a qualified structural engineer to perform DEA to confirm the structural integrity of the buildings. Documents must comply with Alliance Standard Part 8 Section 8.19 and 8.2.
 - ii. Engage a qualified structural engineer to confirm and document that provisions have been made to accommodate concentrated loads. If provisions have not been made, have a qualified structural engineer develop a remediation plan.
 - iii. Properly brace and anchor all the racks to resist earthquake forces to comply with the BNBC and Alliance Standard.
 - iv. Have a qualified structural engineer develop Floor Loading Plans for all the three buildings as per the requirements of Part 8 Section 8.20.5.3
 - v. Have a qualified structural engineer prepare load plans for all the three buildings including the information required in Section 8.20 of the Alliance Standard.
 - vi. Provide signage or the appropriate markings at all areas used for storage to indicate the acceptable loading limits detailed in the Load Plan.
 - vii. Under guidance from a qualified structural engineer, address all areas of needed maintenance.

Long Term (6 Months)

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- i. Factories should apply for Certificate of Occupancy to proper authority.
 - ii. Remove blockage from expansion joint.

The recommendations for Electrical Safety corrective actions are:

Immediate (3 to 6 Days)	<p>Combustible materials are stored within the substation room.</p> <p>Find out the cause of overheating and consider replacement of conductors & equipment.</p>
Short Term (3 Weeks)	<p>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.</p> <p>Install phase separators between terminal connections at the noted locations.</p> <p>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.</p>
Mid Term (6 Weeks)	<p>Need to remove looping of wiring/cables at circuit breakers. Provide protective cable guards for all cable runs from MDB to LT panels.</p> <p>Cables trenches should be covered by nonflammable material.</p> <p>Have a qualified electrical engineer develop as-built electrical</p>

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	<p>drawings detailing key components of the electrical system.</p> <p>Provide means of ventilation for the substation room. Consult a qualified electrical engineer to determine the required ventilation rates based on the installed equipment.</p>
Long Term (6 Months)	<p>Complete thermographic scans at least on a three year cycle. Thermographic scans should be completed in accordance with the Standard for Infrared Inspection of Electrical Systems & Rotating Equipment and NFPA70B or a comparable standard.</p>

The recommendations for Fire Safety corrective actions are:

Immediate	NA
Short Term (3 Weeks)	Remove all locking devices from all egress doors and means of egress components.
Mid Term (6 Weeks)	<p>Remove all sliding gates and doors at rated exit enclosures and replace with properly listed fire-rated doors and hardware.</p> <p>Provide direct connection from fire alarm panel to central station monitoring service or directly to the local fire service.</p>
Long Term (6 Months)	<p>Remove all storage from under exit stairwells.</p> <p>Replace all non-compliant doors in the means of egress with side-hinged swinging type doors.</p> <p>Provide 1-1/2 hour fire rated doors to separate each floor from the exit stair.</p> <p>Relocate electrical panel to a properly protected area.</p> <p>Install initiating devices and notification appliances as required by the Alliance Standard and NFPA 72. Devices should be part of an automatic fire alarm and detection system for the facility.</p> <p>Remove all materials from egress paths</p> <p>Provide emergency lighting for enclosed exit stairs</p> <p>Provide fire-resistive rated construction barriers between hazard types in accordance with Alliance Standard Sections 3.4.2 and 4.5. Consult a qualified fire protection engineer to design the required rated construction barrier.</p> <p>Provide continuously illuminated exit signs per Alliance Standard Section 6.11. Signs shall be placed at all required exits and along egress paths, especially where there is a change in direction for the path of travel.</p> <p>Provide handrails on each side of stairs</p>

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	Post occupant loads for every assembly and production floor in a conspicuous space near the main point of egress
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