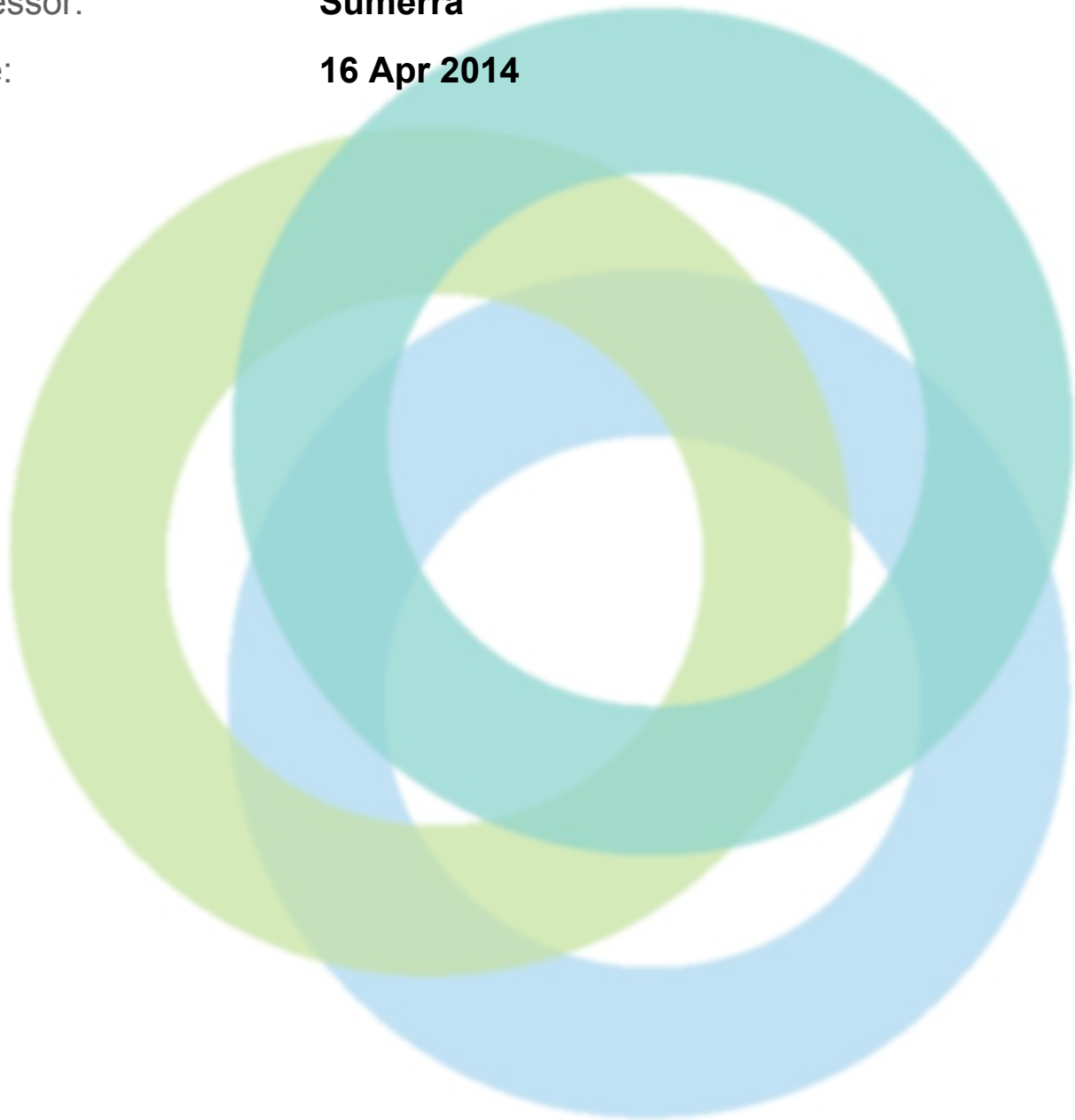


INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **LALMAI FOOTWEAR LTD**
Address: **DHANPUR, CHAPAPUR, KOTWALI, COMILLA
3500,Area 2,46500 COMILLA Chittagong Bangladesh**
Assessor: **Sumerra**
Date: **16 Apr 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:	LALMAI FOOTWEAR LTD
Address:	DHANPUR, CHAPAPUR, KOTWALI, COMILLA 3500,Area 2,46500 COMILLA Chittagong Bangladesh
Country:	Bangladesh
Province:	Chittagong
City:	COMILLA
Zip Code:	3500
Audit Duration:	2 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	May 28, 2014
Final Report Date:	May 28, 2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	17 Total Buildings Building #1 - 4 Story Building #2 - 3 Story Building #3 - 5 story Sheds #1 - 14 - 1 story
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	Building #1 - 4 Story Building #2 - 3 Story Building #3 - 5 story Sheds #1 - 14 - 1 story
Approximate Building Area (SF):	Building #1 - 24000 sqf Building #2 - 26400 sqf Building #3 - 100864 sqf Sheds #1 - 14 - Various
Date of Building Construction:	Building #1 - 1989 Building #2 - 2005 Building #3 - 2007 to 2010 Sheds - 1996
Date of Last Building Renovation/Addition:	Building #1 - 3rd Floor added 2013
Ancillary Structures in Complex:	All structures listed above.
Approximate Ancillary Structures Area (SF):	Not Applicable
Number of Occupants:	Approximately 1600

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Number of Ancillary Levels (Stories):

Not Applicable



ASSESSMENT FINDINGS

Fire Protection Construction

Question:	Are exit enclosures provided with fire-resistive rated construction barriers?
Priority Level:	High
Non-Compliance Level:	3
Description:	For Buildings with exit stairs (Buildings 1-3), enclosures are not provided with fire rated door assemblies in the penetrations to the enclosures. In building #01, South window of west stairwell is close to west window of factory floor (non fire rated windows).
Source of Findings:	Photograph: Photo of window of west stairwell Building 1 Photo of typical door to exit enclosure
Suggested Plan of Action:	Factory will need to install fire rated door assemblies at all exits (1.5 hour rating). Fire doors assemblies shall conform to NFPA 252, BS 476 Part 22, EN 1364-1, GB 12955-2008, or IS 3614. Part II. Doors must remain in closed position or be of self-closing type. Install properly rated fire construction in Building #1, west stairwell. This can be accomplished by installing fire rated window assemblies (1.5 hour), sealing windows completely with fire rated construction materials (2 hour), or sealing exit enclosure with fire rated construction materials (2 hour). Consult a qualified fire protection engineer to design the required rated construction barriers.
Suggested Deadline Date:	31 Dec 2014
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation
Question:	Are openings and penetrations through rated walls and/or assemblies protected?
Priority Level:	High
Non-Compliance Level:	2
Description:	In buildings #1 and #2 factory has installed a floor to floor conveyor system. The penetrations for the system are not protected.
Source of Findings:	Photograph: Photo of Conveyor system
Suggested Plan of Action:	Consult with a qualified fire engineer to design a system to protect the conveyor penetrations. Options include: building a fire rated shaft with rated door/window assemblies around the shaft; installation and automatic closing ceiling closure system (conveyor system enclosure systems are commercially available); automatic sprinklers, water spray, water curtains and deluge systems; or other acceptable means of protection determined by engineer.
Suggested Deadline	31 Mar 2015





Date:	
Standard:	Includes doors, windows, ducts, piping, etc. Reference Alliance Standards Part 4 Section 4.6 Opening Protectives and Section 4.7 Penetrations
Question:	Certificates of Occupancy for each building have been issued and are on file.
Priority Level:	Low
Non-Compliance Level:	3
Description:	No official occupancy certificates signed by relevant authority were available for any of the factory buildings.
Source of Findings:	Document Review: No official occupancy certificates signed by relevant authority were available
Suggested Plan of Action:	Provide Certificates of Occupancy for review.
Suggested Deadline Date:	31 Oct 2014
Standard:	Are certificates of occupancy provided for each building or ancillary structure?

Fire Protection Systems

Question:	Does the building have a Standpipe System?
Priority Level:	High
Non-Compliance Level:	3
Description:	Factory has a standpipe system, but system does not meet requirement of Alliance Standard Part 5 Section 5.4.2. Currently the system consists of Class II hose connections at stairs and 11 Class I hose connections located on GF of structures.
Source of Findings:	Visual Assessment: Class II hose connections observed at stairs and 11 Class I hose connections observed outside of structures (Ground Floor)
Suggested Plan of Action:	Revise standpipe system so there are Class III standpipe hose connections (Class I 65 mm & Class II 40mm) in each stairwells at each floor level. The standpipe system needs to be evaluated for compliance with the design pressure and flow demands of NFPA 14 or BNBC as cited in 5.4.3. Standalone standpipe systems shall be confirmed to meet the local BNBC requirements with a minimum 450 kPa (65 psi) pressure at the hydraulically most remote hose connection or NFPA 14. This testing should be documented and available for review.
Suggested Deadline Date:	31 Dec 2014
Standard:	Does the building have a standpipe system installed where required. Alliance Standard Part 5 Section 5.4.2



Question:	Are notification and initiation devices for the fire alarm system installed at required locations based on occupancy type?
Priority Level:	High
Non-Compliance Level:	2
Description:	Automatic alarm system is only installed in Building #3. As per Alliance standard, automatic alarm systems should be installed in all G2 occupancies which would include: Building 1 Building 2 Building 3 Sheds 1-5 Additionally, coverage in Building #3 is deemed inadequate (3rd floor areas lack detection devices).
Source of Findings:	Visual Assessment: Automatic alarm system is only installed in Building #3.
Suggested Plan of Action:	Install automatic fire alarm system with sufficient smoke/heat detectors as per NFPA 72 in all production buildings. Automatic detectors should be tied into the fire alarm system. Alarm system should initiate occupant notification upon activation of detectors in addition to the manual fire alarm stations. All fire alarm installations shall be submitted for review by the Alliance for review prior to commencement of installation.
Suggested Deadline Date:	31 Dec 2014
Standard:	Pull stations at egress points, smoke detectors in air handling equipment, visual and audible devices spaced appropriately based on occupancy type. Reference NFPA 72
Question:	Does the building have a fire pump?
Priority Level:	High
Non-Compliance Level:	1
Description:	Fire pump is not monitored by the alarm system.
Source of Findings:	Photograph: Photo of fire pumps
Suggested Plan of Action:	The fire pump should be monitored by a fire alarm system as per NFPA 20. Consult a qualified fire engineer to design and install monitoring system as required.
Suggested Deadline Date:	31 Dec 2014
Standard:	Alliance Standard Part 5 Fire Protection Systems
Question:	Are fire department connections provided and clearly identified for the Fire Protection Systems?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	Factory does not have fire department connections as required. Outlet





	connections (Class I) are available at GF areas around properly, however no outlet connections area provided to allow fire department pumper vehicles to draw water from system.	
Source of Findings:	Visual Assessment: No fire department outlet connections observed and no signage for connections.	
Suggested Plan of Action:	As part of revision of standpipe system, fire department (Siamese) inlet connections should be installed to allow fire department pumper equipment to supplement the fire protection systems. Fire department outlet connections shall be provided to allow fire department pumper vehicles to draw water from ground-level or underground water storage tanks. Connections shall match the Fire Service and Civil Defense hose thread standard. Signage for standpipe system is not in compliance with NFPA 14 Chapter 6 (e.g. no sign on Fire Department connection indicating STANDPIPE in 1 in lettering).	
Suggested Deadline Date:	31 Dec 2014	
Standard:	Alliance Standard Part 5 Section 5.5.4 Fire Department Connections	
Question:	Is the fire alarm and detection system monitored by a central station monitoring service or directly connected to the Fire Service and Civil Defense?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	With the exception of building #3, buildings have manual fire alarm system only without an alarm panel. None of the systems are monitored by a central station monitoring service or directly connected to the Fire Service and Civil Defense.	
Source of Findings:	Visual Assessment: None of the systems are monitored by a central station monitoring service or directly connected to the Fire Service and Civil Defense.	
Suggested Plan of Action:	As noted elsewhere, production buildings (occupancy G2) are required to have an automatic alarm system. Installation of automatic fire alarm systems should include an fire alarm control panel/annunciator. Until that time that a central station monitoring service or direct connection to the Fire Service and Civil Defence can be set up, a person shall be assigned to contact the fire department in the event of fire alarm activation. An annunciator shall be located in a constantly attended location to alert this person. It is recommended that a Emergency Control Room be established for the complex.	
Suggested Deadline Date:	31 Dec 2014	
Standard:	Alliance Standard Part 5 Section 5.7.5 Monitoring	
Question:	Is signage for the standpipe system installed at required locations and on required components?	
Priority Level:	Low	
Non-Compliance Level:	3	



Description:	Valves and valve cabinets of existing systems do not have labeling or signage. No Hydraulic design information sign is available.
Source of Findings:	Visual Assessment: Valves and valve cabinets of existing systems do not have labeling or signage. No Hydraulic design information sign is available.
Suggested Plan of Action:	Upon installation of compliant standpipe system, include required identification signs at the noted locations. Signage must comply with NFPA 14, including: identification of all valves with indication of what service they control, valve cabinets should be marked to include their contents, signs indicating the hydraulic design (e.g. location of most remote hose connections, design flow rate, inlet and outlet pressure, and design static pressure).
Suggested Deadline Date:	31 Oct 2014
Standard:	Reference NFPA 14 Chapter 6
Question:	Are inspection, maintenance, and testing procedures of the fire pump documented and up to date?
Priority Level:	Low
Non-Compliance Level:	3
Description:	Detailed inspection, maintenance, and testing records for the fire pump were not available for review.
Source of Findings:	Document Review: Detailed inspection, maintenance, and testing records for the fire pump were not available for review.
Suggested Plan of Action:	Establish an inspection, maintenance, and testing program for the fire pump. Program must comply with NFPA 25. All inspection, maintenance, and testing should be documented with records available for review.
Suggested Deadline Date:	31 Dec 2014
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps

Means of Egress

Question:	Doors are not locked in the direction of egress under any conditions. All hasps, locks, slide bolts, and other locking devices have been removed where required.
Priority Level:	High
Non-Compliance Level:	3
Description:	Although not locked during inspection, doors and shutters have locking mechanisms (all doors in factory).
Source of Findings:	Visual Assessment: Locking mechanisms observed on doors.



Suggested Plan of Action:	Remove all hasps, locks, slide bolts, or other locking devices all doors to exits / means of egress. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
Suggested Deadline Date:	30 Sep 2014
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates
Question:	All doors in a means of egress are of the side-hinged swinging type.
Priority Level:	High
Non-Compliance Level:	3
Description:	Majority of factory doors are either metal sliding (collapsible) or metal rolling (Shutter)
Source of Findings:	Photograph: Photo of typical door
Suggested Plan of Action:	Remove all sliding or rolling doors at and within the exit stairs and along all portions of the means of egress. Replace with side-hinged swinging type doors in compliance with Standard. As noted elsewhere, exit enclosures require fire rated door assemblies (which should be side-hinged).
Suggested Deadline Date:	31 Dec 2014
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates
Question:	Interior exit stairways and ramps terminate at an exit discharge except where terminating at a rated exit passageway.
Priority Level:	High
Non-Compliance Level:	3
Description:	In building #01, 02, 03, all west stair (in building 02, east stair also) discharges at entry to production storage floor.
Source of Findings:	Photograph: Photo of interior stair discharge.
Suggested Plan of Action:	As noted elsewhere, fire rated door assemblies should be installed at entrance to exit enclosure. This would include the GF entry to the bottom of exit stair from production storage.
Suggested Deadline Date:	31 Dec 2014
Standard:	Alliance Standard Part 6 Section 6.14 Exit Enclosures
Question:	Occupant loads are posted for every assembly and production floor in a conspicuous space near the main point of egress.
Priority Level:	Medium





Non-Compliance Level:	3	
Description:	No loads are posted as per Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	
Source of Findings:	Visual Assessment: No loads are posted	
Suggested Plan of Action:		
Suggested Deadline Date:	30 Sep 2014	
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	
Question:	All paths of egress are provided with compliant means of illumination.	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	In the majority of the Floors of building #01, 02 and 03 egress route are not likely properly illuminated (10 lux).	
Source of Findings:	Visual Assessment: Visual observations did not indicate that an illumination of 10 lux would be achieved. No records of testing available.	
Suggested Plan of Action:	Test illumination of egress (light meter or other means) to confirm conformance. Egress paths shall be illuminated at all times the building is occupied. Illumination shall be a minimum of 10 lux for all corridors, exit doors, and stairways. Aisles shall be provided with a minimum 2.5 lux. If necessary install additional means of emergency lighting. Means of egress illumination shall be provided with emergency power or supplemented with battery powered lights that provide minimum 10 lux for no less than 30 min in the event of failure of normal lighting.	
Suggested Deadline Date:	31 Oct 2014	
Standard:	Alliance Standards Part 6 Section 6.7 Egress Illumination and Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape	
Question:	Handrails are provided on both sides of each stairway. Intermediate handrails are provided when the stair width exceeds 2.2 m (87 in.). Handrails are not mounted lower than 760 mm (30 in.) or higher than 1100 mm (44 in.).	
Priority Level:	Medium	
Non-Compliance Level:	3	



Description:	Handrails are provided only in one side of stairs (All multi-story buildings) and ramp at building #03.
Source of Findings:	Photograph: Photo of stairs Photo of ramp
Suggested Plan of Action:	Handrails shall be provided on both sides of each exit stairway and ramp. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread.
Suggested Deadline Date:	30 Sep 2014
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards
Question:	Illuminated exit signs are placed at entrances to exits and along the path of egress anywhere the continuation of egress is not obvious or there is a change in the direction of the path of travel.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Along the path egress , appropriate exit signs are not provided. Egress path to assembly zone is not properly indicated.
Source of Findings:	Visual Assessment: Appropriate exit signs are not provided along entire path of egress.
Suggested Plan of Action:	Install Illuminated exit signs along the path of egress anywhere the continuation of egress is not obvious or there is a change in the direction of the path of travel. Also provide direction to the assembly zone.
Suggested Deadline Date:	20 Oct 2014
Standard:	Alliance Standard Part 6 Section 6.11 Exit Signs
Question:	Illuminated exit signs are provided with battery backup or emergency power and are continuously illuminated.
Priority Level:	Medium
Non-Compliance Level:	1
Description:	For building #01, 1st floor, emergency exit sign is not provide with emergency power system.
Source of Findings:	Photograph: Exit sign not illuminated.
Suggested Plan of Action:	Provide an emergency power source, either by battery back or up or by connecting to the emergency power system, for all illuminated exit signs.
Suggested Deadline Date:	30 Nov 2014
Standard:	Alliance Standards Part 6 Section 6.11 Exit Signs and Part 10 Section 10.12





	Illumination of Exit Signs and Means of Escape	
Question:	Stair designation signs are provided at each floor entrance from the stair to the floor in English and Bengali. Signs indicate the name of the stair and the floor level. Signs are posted adjacent to the door.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	Stair designation signs are not provided at each floor entrance from the stair to the floor in English and Bengali.	
Source of Findings:	Visual Assessment: Stair designation signs no observed.	
Suggested Plan of Action:	Install signage (n English and Bengali) adjacent to each stair door indicating the stair name and the floor level at the noted locations.	
Suggested Deadline Date:	30 Sep 2014	
Standard:	Alliance Standard Part 6 Section 6.9 Stairs	
Fire Safety Programs		
Question:	Emergency egress maps are posted at the entrance to each exit stair or main point of egress.	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Emergency egress maps are posted however they are not accurate representations of current floor layout (all stairs not shown).	
Source of Findings:	Visual Assessment: Emergency egress maps do not show all stairs	
Suggested Plan of Action:	Create and post revised evacuation plans that detailed map of each floor of the facility and includes location of all emergency exits, escape routes, safety equipment and hazardous areas. When developing new diagrams, Sumerra recommends following the ASTM E2238 - 12 Standard Guide for Evacuation Route Diagrams. It is also recommended that Master copies of plans should be kept on file as part of your emergency action plan. Plans should be reviewed at least annually and revised as necessary.	
Suggested Deadline Date:	20 Oct 2014	
Standard:	Alliance Standards Part 13 Section 13.4 Evacuation Plan	
Question:	A Fire Safety Director position has been filled.	
Priority Level:	Low	
Non-Compliance Level:	3	



Description:	Fire Safety Director position has not been filled, fire safety is handled by compliance department.
Source of Findings:	Worker Interviews: Management confirms no Fire Safety Director position
Suggested Plan of Action:	Create a Fire Safety Director position and fill the position with an individual that has had sufficient training to be able to carry the required duties.
Suggested Deadline Date:	12 Nov 2014
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director
Question:	A written housekeeping policy is established and enforced.
Priority Level:	Low
Non-Compliance Level:	3
Description:	No written housekeeping policy is established
Source of Findings:	Document Review: No written housekeeping policy was available for review.
Suggested Plan of Action:	Establish written corporate and plant policies on housekeeping to ensure scheduled cleaning for floor, wall, ceiling, supply and return air ventilation systems. Promptly reschedule skipped cleanings. Provide a documented line of authority for authorizing a cleaning delay and rescheduling. As a general rule the maximum tolerable deposit thickness for loose fluffy lint is 13 mm (½ in.) over a maximum of 46.5 m ² (500 ft ²). Limit dense deposits to 6 mm (¼ in.) and oil saturated deposits to 3.2 mm (⅛ in.).
Suggested Deadline Date:	12 Nov 2014
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping
Question:	A hot-work permit program has been established.
Priority Level:	Low
Non-Compliance Level:	3
Description:	Factory reports that they have an approval system but it is not a formal hot work permitting program (no written program or documentation of permits).
Source of Findings:	Document Review: No written hot work program available for review.
Suggested Plan of Action:	Develop a hot work permit program. The program must comply with the requirements of NFPA 51B
Suggested Deadline Date:	31 Dec 2014
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B

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