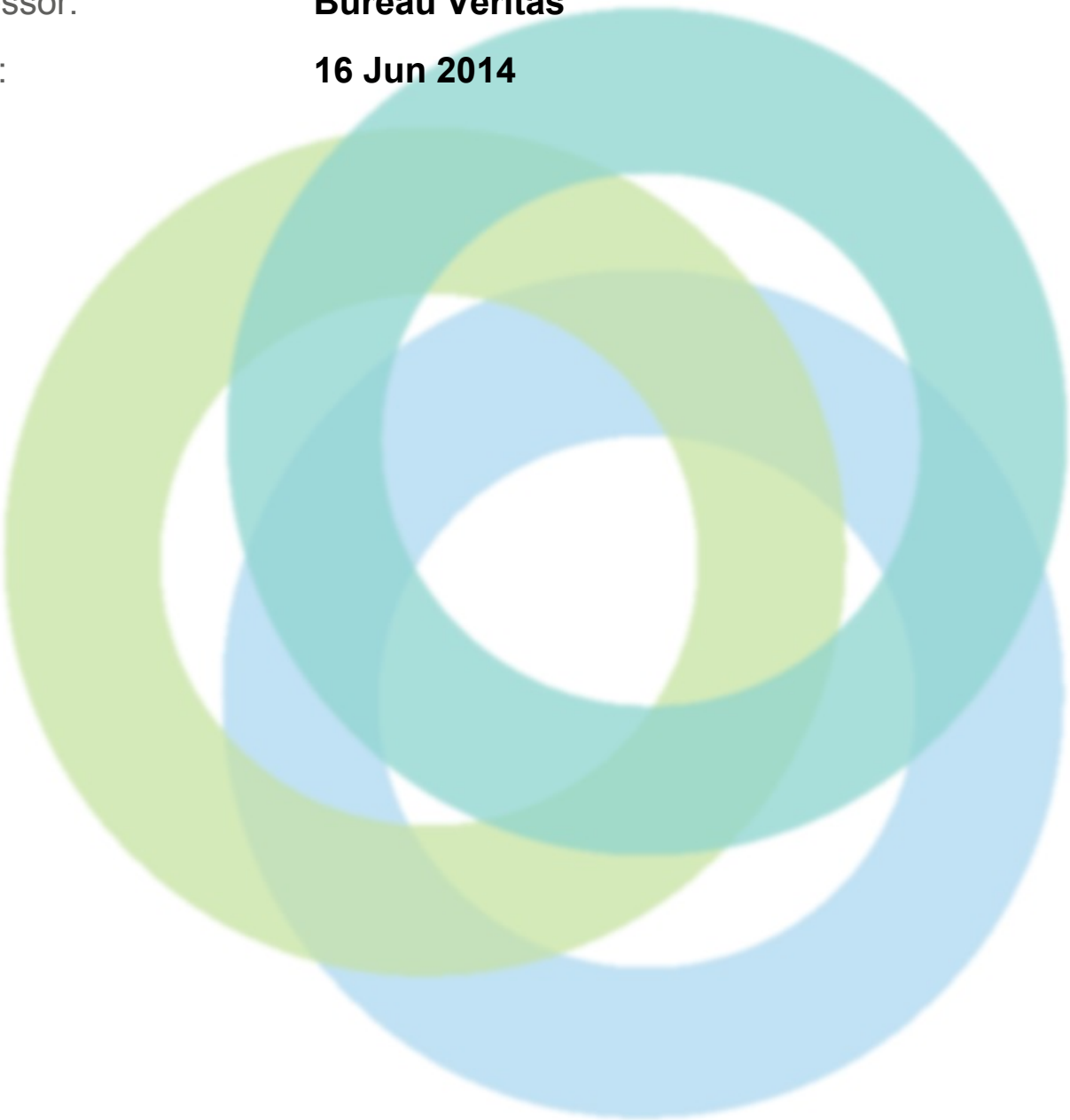


INITIAL FIRE ASSESSMENT REPORT (FAR)

Factory Name: **APEX LINGERIE LIMITED**
Address: **Chandra, Shafipur, Gazipur Gazipur Dhaka
Bangladesh**
Assessor: **Bureau Veritas**
Date: **16 Jun 2014**



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ALLIANCE
FOR BANGLADESH WORKER SAFETY

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.

Factory Name: **APEX LINGERIE LIMITED**

Assessor: **Bureau Veritas**

Address: **Chandra, Shafipur, Gazipur Gazipur Dhaka Bangladesh**

Date: **16 Jun 2014**



ALLIANCE
FOR BANGLADESH WORKER SAFETY

GENERAL INFORMATION

General Information

Factory Name:	APEX LINGERIE LIMITED
Address:	Chandra, Shafipur, Gazipur Gazipur Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Gazipur
Zip Code:	1751
Audit Duration:	
Re-Audit:	Re-Audit After 0 Months
Draft Report Date:	06-16-2014
Final Report Date:	06-30-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex:	There are 23 buildings in the factory premises out of which twelve are main production buildings and eleven are ancillary buildings. The buildings are named as: 1) Four story ASKML building, 2) Single story dying shed, 3) Single story dying finishing shed-1, 4) Single story dying finishing shed-2, 5) Single story raising shed, 6) Single story ASKML knitting shed, 7) Single story winding shed, 8) Three story dying shed, 9) Seven story ATPML building, 10) Eight story chemical store building, 11) Six story Apex Lingerie building, 12) Single story dying shed (Apex Lingerie), 13) Four story corporate office building, and ten single story buildings in the factory premises.
Is the building(s) owned or rented by the Factory:	Owned
Number of Building Levels (Stories):	Information provided below as per following format: Highest occupied floor level [Height up to roof], Stories above grade, Stories below grade, Occupied level. 1) ASKML building: 12.80 m or 42 ft [16.15 m or 53 ft], 4, 0, 4. 2) Dying shed: 30 cm or 1 ft [6.71 m or 22 ft], 1, 0, 1. 3) Dying finishing shed-1: 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 4) Dying finishing shed-2: 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 5) Raising shed: 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 6) ASKML knitting shed: 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 7) Winding shed: 30 cm or 1 ft [6.71 m or 22 ft], 1, 0, 1. 8) Three story dying shed: 14.94 m or 49 ft [18.29 m or 60 ft], 3, 0, 3. 9) ATPML building: 28.66 m or 94 ft [31.71 m or 104 ft], 7, 0, 7. 10) Chemical store building: 24.70 m or 81 ft [28.66 m or 94 ft], 8, 0, 8. 11) Apex Lingerie building: 22.56 m or 74 ft [26.52 m or 87 ft], 6, 0, 6. and eleven single story buildings and one four story corporate office building in the factory premises.
Approximate Building Area (SF):	Total area of all buildings in the factory premises: 1149719 sft. Building wise breakdown as follows: 1) Four story ASKML building: 103414 sft 2) Single story dying shed: 51561 sft, 3) Single story dying finishing shed-1: 21223 sft, 4) Single story dying finishing shed-2: 9160 sft, 5) Single story raising shed: 6144 sft, 6) Single



	story ASKML knitting shed: 48410 sft, 7) Single story winding shed: 65158 sft, 8) Three story dying shed: 9801 sft 9) Seven story ATPML building: 506181 sft 10) Eight story chemical store building: 51560 sft 11) Six story Apex Lingerie building: 208625 sft 12) Single story dying shed (Apex Lingerie): 19620 sft, 13) Four story corporate office building: 16821 sft, and rest ten single story buildings area 32041 sft.
Date of Building Construction:	Factory personnel informed the date of construction as follows: 1) ASKML building: Finished in 2002, 2) Dying shed: 2009, 3) Dying finishing shed-1: 1992, 4) Dying finishing shed-2: 2009, 5) Raising shed: 1991, 6) ASKML knitting shed: 1991, 7) Winding shed: 2002, 8) Dying shed: 2002, 9) ATPML building: 2013, 10) Chemical store building: 2013, 11) Apex Lingerie building: 2010, 12) Dying shed (Apex Lingerie): 2006, 13) Corporate office building: 2006, 14) Childcare & medical building: 2007, 15) Fire pump building: 2014, 16) Acid shed: 2001, 17) Generator shed (Yarn dying): 2002, 18) Pump shed (Yarn dying): 2002, 19) Boiler shed (Yarn dying): 2002, 20) Workers dining (Apex Lingerie): 2003, 21) Generator & work shop shed (ATPML): 2003, 22) Boiler shed (ATPML): 2002, 23) Generator building (ATPML): 2002.
Date of Last Building Renovation/Addition:	Factory personnel informed the date of last building renovation as follows: 1) Four story ASKML building: Finished in 2004, 2) Six story Apex Lingerie building: Finished in 2010. For rest of the buildings no record for date of renovation or addition was found.
Ancillary Structures in Complex:	1) Four story corporate office building, 2) Single story childcare & medical building, 3) Single story fire pump building, 4) Single story acid shed, 5) Single story generator shed (Yarn dying), 6) Single story pump shed (Yarn dying), 7) Single story boiler shed (Yarn dying), 8) Single story workers dining (Apex Lingerie), 9) Single story generator & work shop shed (ATPML), 10) Single story boiler shed (ATPML), 11) Single story generator building (ATPML).
Approximate Ancillary Structures Area (SF):	1) Four story corporate office building: 16821 sft, (Ground floor: 4487 sft, 1st floor: 4487 sft, 2nd floor: 4487 sft, 3rd floor: 3360 sft), 2) Single story childcare & medical building: 3293 sft, 3) Single story fire pump building: 250 sft, 4) Single story acid shed: 300 sft, 5) Single story generator shed (Yarn dying): 9648 sft, 6) Single story pump shed (Yarn dying): 300 sft, 7) Single story boiler shed (Yarn dying): 2450 sft, 8) Single story workers dining (Apex Lingerie): 9500 sft, 9) Single story generator & work shop shed (ATPML): 700 sft, 10) Single story boiler shed (ATPML): 4500 sft, 11) Single story generator building (ATPML): 1100 sft.
Number of Occupants:	Total number of occupants: 11824. 1) ASKML building: 2004. 2) Single story dying shed: 400, 3) Dying finishing shed-1: 50, 4) Dying finishing shed-2: 25, 5) Raising shed: 40, 6) ASKML knitting shed: 55, 7) Winding shed: 380, 8) Three story dying shed: 140 9) ATPML building: 5120 10) Chemical store building: 183. 11) Apex Lingerie building: 3303, 12) Dying shed (Apex Lingerie): 85, 13) Corporate office building: 10, 14) Childcare & medical building: 12, 15) Fire pump building: 1, 16) Acid shed: 1, 17) Generator shed (Yarn dying): 2, 18) Pump shed (Yarn dying): 1, 19) Boiler shed (Yarn dying): 2, 20) Workers dining (Apex Lingerie): 5, 21) Generator & work shop shed (ATPML): 2, 22) Boiler shed (ATPML): 2, 23) Generator building (ATPML): 1.
Number of Ancillary Levels (Stories):	Information provided below as per following format: Highest occupied floor level [Height up to roof], Stories above grade, Stories below grade, Occupied level. 1) Corporate office building: 11.28 m or 37 ft [14.18 m or 46.5 ft], 4, 0, 4. 2) Childcare & medical shed: 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 3) Fire pump building: 30 cm or 1 ft [3.05 m or 10 ft], 1, 0, 1. 4) Acid shed: 30 cm or 1 ft [3.05 m or 10 ft], 1, 0, 1. 5) Generator shed (Yarn dying): 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 6) Pump shed (Yarn dying): 30 cm or 1 ft [3.05 m or 10 ft], 1, 0, 1. 7) Boiler shed (Yarn dying): 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 8) Workers dining: 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 9) Generator & work shop shed (ATPML): 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 10) Boiler shed (ATPML): 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1. 11) Generator building (ATPML): 30 cm or 1 ft [4.57 m or 15 ft], 1, 0, 1.
Occupancy Type:	1) Four story ASKML building: [Ground floor: G2 (Embroidery, design), H2 (Cartoon store, fabric store), J2 (Chemical store, salt store), Mezzanine floor: E4 (Conference hall, Prayer room), F1 (Office), G2 (Auto flat section), 1st floor: G2 (Finishing, packing, folding, iron section, spot removing room), H2 (Finishing Jut store), F1 (Office), 2nd floor: G2 (Sewing), H2 (Accessories store), 3rd floor: G2 (Sewing, collar section)], 2) Single story dying shed: G2 (Dying finishing), 3) Single story dying finishing shed-1: G2 (Dying finishing), H2 (Dying store), F1 (Office), 4) Single story dying finishing shed-2: G2 (Dying finishing), H2 (Dying store), F1 (Office), 5) Single story raising shed: G2 (Raising), 6) Single story ASKML knitting shed: H2 (Yarn store), G2 (Knitting), 7) Single story winding shed: G2 (Soft winding, hard winding, nylon winding, batch section, plastic cone



	production), H2 (Yarn store) and see the description.
Construction Type:	1) Four story ASKML building: Type 1, 2) Single story dying shed: Non-rated, 3) Single story dying finishing shed-1: Non-rated, 4) Single story dying finishing shed-2: Non-rated, 5) Single story raising shed: Non-rated, 6) Single story ASKML knitting shed: Non-rated, 7) Single story winding shed: Non-rated, 8) Three story dying shed: Non-rated, 9) Seven story ATPML building: Type 1, 10) Eight story chemical store building: Type 1, 11) Six story Apex Lingerie building: Type 1, 12) Single story dying shed (Apex Lingerie): Non-rated, 13) Four story corporate office building: Type 1, 14) Single story childcare & medical building: Type 1, 15) Single story fire pump building: Type 1, 16) Single story acid shed: Non-rated and see the description.
Height of Highest Occupied Floor Level Above Grade:	1) Four story ASKML building: 12.80 m or 42 ft, 2) Single story dying shed: 30 cm or 1 ft above grade, 3) Single story dying finishing shed-1: 30 cm or 1 ft above grade, 4) Single story dying finishing shed-2: 30 cm or 1 ft above grade, 5) Single story raising shed: 30 cm or 1 ft above grade, 6) Single story ASKML knitting shed: 30 cm or 1 ft above grade, 7) Single story winding shed: 30 cm or 1 ft above grade, 8) Three story dying shed: 14.94 m or 49 ft, 9) Seven story ATPML building: 28.66 m or 94 ft, 10) Eight story chemical store building: 24.70 m or 81 ft, 11) Six story Apex Lingerie building: 22.56 m or 74 ft, 12) Single story dying shed: 30 cm or 1 ft above grade, 13) Four story corporate office building: 11.28 m or 37 ft, 14) Single story childcare & medical shed: 30 cm or 1 ft above grade, 15) Single story fire pump building: 30 cm or 1 ft above grade, 16) Single story acid shed: 30 cm or 1 ft above grade and see the description.



ASSESSMENT FINDINGS

Fire Protection Construction

Question:	Are openings and penetrations through rated walls and/or assemblies protected?	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	The walls between store and cutting section of 4th floor of ATPML building contains high glass window. The same type of window is also present on the 3rd floor which contains wire mesh. Doors of finished goods store and bonded warehouse on 1st floor, finished goods store on 2nd floor, Carton store on 6th floor of seven story ATPML building is not fire rated. Also doors of cartoon store and fabric store on ground floor of four story ASKML building, store at single story dying finishing shed-2, yarn store at single story ASKML knitting shed, yarn store of Single story winding shed, store on ground of six story Apex Lingerie building is not fire rated. The walls of stair-1 (south-middle) of ATPML buildings contain cooling systems in the rated walls. The walls of chemical store and dying area of single story dying finishing shed-1 contains exhaust fans. Such unprotected openings are not permitted.	
Source of Findings:	Photograph: The noted openings were found unprotected.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Includes doors, windows, ducts, piping, etc. Reference Alliance Standards Part 4 Section 4.6 Opening Protectives and Section 4.7 Penetrations	
Question:	Are exit enclosures provided with fire-resistive rated construction barriers?	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	None of the stairs of any building are fire rated. No fire rated doors are provided at any exits leading to exit enclosure of any building. The walls of the exit enclosures are not also fire rated as required.	
Source of Findings:	Photograph: Exit enclosure is not provided with fire resistive rated barrier.	
Suggested Plan of Action:		
Suggested Deadline Date:		



Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Are shafts provided with the minimum fire-resistance rating?	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	There are cargo lifts in the seven story ATPML building, eight story chemical building, six story Apex lingerie building and four story ASKML building. All cargo lifts are not provided with fire resistive rated barriers.	
Source of Findings:	Photograph: The cargo lifts without fire separation barriers were observed at all main buildings in the factory premises.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 4 Section 4.5.7.1 through 4.5.7.3	
Question:	Are separations between hazards provided with fire-resistive rated construction barriers.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The spot removing room on 5th floor of ATPML building is separated by glass partition from sewing section. The finished good warehouse on 2nd floor of ATPML building is not separated by fire resistant barrier from stair case. The partition of chemical stores in the 3 story dying shed is made of particle board. The finished goods store at mezzanine floor of six story Apex lingerie building is not provided with proper fire resistant construction barrier.	
Source of Findings:	Photograph: Occupancy separations were not found fire separated.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 4 Section 4.5 Separation	
Question:	Fire dampers installed on air-conditioning and ventilation ducts appear to be in good condition and operational.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Ducted air conditioning is available at seven story ATPML building but the duct is not provided with fire damper.	



Source of Findings:	Visual Assessment: Ducted air conditioning is found at seven story ATPML building.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	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:	1
Description:	No occupancy certificate is available for any building in the factory premises.
Source of Findings:	Document Review: There was no occupancy certificate for any of the buildings.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Are certificates of occupancy provided for each building or ancillary structure?

Fire Protection Systems

Question:	Is the building protected by an automatic sprinkler system?
Priority Level:	High
Non-Compliance Level:	3
Description:	An automatic sprinkler system is required in the seven story ATPML building and eight story chemical store building as the highest occupied floor level for both buildings are 28.66 m and 24.70 m, respectively, which is more than 23 m. There is an automatic sprinkler system installed on some floors of chemical store building and six story Apex lingerie building but no hydraulic design was available for the existing system.
Source of Findings:	Photograph: No automatic sprinkler was found installed at required locations.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Reference Alliance Standards Part 3 Section 3.5.3 Existing Buildings, Part 5 Section 5.3 Automatic Sprinkler Systems and Section 6.13 Travel Distance





Question:	Does the building have a Standpipe System?	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	The height of the highest occupied floor of the main four story ASKML building is 12.80 m or 42 ft, three story dying shed is 14.94 m or 49 ft, seven story ATPML building is 28.66 m or 94 ft, eight story chemical store building is 24.70 m or 81 ft, six story Apex Lingerie building is 22.56 m or 74 ft, four story corporate office building is 11.28 m or 37 ft. Hence, class III system is required in non sprinklered buildings and a class I system is required in the sprinklered buildings as per NFPA 14. Only a class II (40 mm) standpipe system is installed in these buildings on floors and on some stair landings. Also, class II standpipe installation is ongoing on some floors. No class I standpipe system is installed in stairwells of these buildings. A centralized standpipe system installation is ongoing but no hydraulic design was found. At roof, the hose pressure was observed at less than 4.5 bars.	
Source of Findings:	Visual Assessment: A class-II standpipe system was available but there was no hydraulic design found.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Does the building have a standpipe system installed where required. Alliance Standard Part 5 Section 5.4.2	
Question:	Does the building have a fire pump?	
Priority Level:	High	
Non-Compliance Level:	3	
Description:	Fire pump set is available with backup power, however it does not comply with the requirements of Alliance Standards and NFPA 20. Hydraulic calculation for required standpipe and sprinkler systems are not available. Therefore, required capacity of fire pump is not known. Suction lift is used whereas suction head is required as per NFPA 20. Additionally, detailed design of pump components and layout as per NFPA 20 are not found.	
Source of Findings:	Photograph: Fire pump is available in the factory premises but not in accordance with NFPA 20.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 5 Fire Protection Systems	
Question:	Are sprinklers spaced and installed at the required heights in order to provided	



	required coverage and protection?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Automatic sprinkler is available on some floors of chemical store building and six story Apex lingerie building. But there is no hydraulic design available for the existing sprinkler system to verify the spacing.	
Source of Findings:	Document Review: No hydraulic design available for the existing sprinkler system to verify the spacing.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference NFPA 13	
Question:	All valves controlling the automatic sprinkler systems are electrically supervised by a listed fire alarm system control unit.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Automatic sprinkler system is available on some floors of chemical store building and six story Apex lingerie building. Valves controlling the automatic sprinkler systems are not electrically supervised.	
Source of Findings:	Visual Assessment: Valves controlling the automatic sprinkler systems are not electrically supervised.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standard Part 5 Section 5.3.5 Supervision and Alarms.	
Question:	All storage is maintained with a 460 mm (18 in.) minimum clearance from the top of storage to the sprinkler deflector.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Automatic sprinkler is available on some floors of chemical store building and six story Apex lingerie building. Storage is not maintained with a 460 mm (18 in.) minimum clearance from the top of storage to the sprinkler deflector.	



Source of Findings:	Visual Assessment: Storage is not maintained with a 460 mm (18 in.) minimum clearance from the top of storage to the sprinkler deflector.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 5 Section 5.3.6.1 Storage Clearance	
Question:	Fire extinguishers are inspected, tested, and maintained as required.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Fire extinguishers are inspected, tested and maintained every month at regular intervals but not in accordance with NFPA 10 Chapter 7.	
Source of Findings:	Document Review: No document regarding inspection, maintenance and testing procedure of fire extinguisher was found in the documents shown by the factory personnel.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	NFPA 10 Chapter 7	
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:	2	
Description:	Detection system is monitored centrally from security station but not connected to fire service and civil defense.	
Source of Findings:	Photograph: No central station for monitoring service is available.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 5 Section 5.7.5 Monitoring	
Question:	Are hangers, bracing, and restraints properly installed and supporting the system piping?	
Priority Level:	Medium	



Non-Compliance Level:	1
Description:	Automatic sprinkler system is available on some floors of chemical store building and six story Apex lingerie building. No approved hydraulic calculation is available for the installed system. Visually it seems that hangers and restraints supporting sprinkler system are sufficient.
Source of Findings:	Document Review: Hydraulic design complying with NFPA 13 for the existing sprinkler system was not available.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Reference NFPA 13 Chapter 9 Hanging, Bracing, and Restraint of System Piping.
Question:	Are inspection, maintenance, and testing procedures of the sprinkler system documented and up to date?
Priority Level:	Low
Non-Compliance Level:	2
Description:	Automatic sprinkler is available on some floors of chemical store building and six story Apex lingerie building but inspection, maintenance and testing procedures of the sprinkler system as per NFPA 25 chapter 5 Table 5.1.1.2 is not documented and up to date.
Source of Findings:	Document Review: No document regarding inspection, maintenance and testing procedure of the sprinkler system was found during audit.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Reference NFPA 25 Chapter 5 Sprinkler Systems Table 5.1.1.2
Question:	Are identification signs for the sprinkler system installed at the required locations?
Priority Level:	Low
Non-Compliance Level:	2
Description:	Automatic sprinkler system is available on some floors of chemical store building and six story Apex lingerie building but identification signs for the sprinkler system are not installed at the required locations as per NFPA 13.
Source of Findings:	Visual Assessment: No identification sign was found for the installed sprinkler system as per NFPA 13.



Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference NFPA 13	
Question:	Does the automatic sprinkler system have an approved audible device activated by waterflow equal to the flow of one sprinkler?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Automatic sprinkler is available on some floors of chemical store building and six story Apex lingerie building. No such audible device was found for the existing sprinkler system.	
Source of Findings:	Visual Assessment: No approved audible device was found in the existing sprinkler system.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 5 Section 5.3.5.2 Alarms.	
Question:	Is signage for the standpipe system installed at required locations and on required components?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Signage for the available class II standpipe system is not installed.	
Source of Findings:	Visual Assessment: No such signage for standpipe component was observed.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference NFPA 14 Chapter 6	
Question:	Are inspection, maintenance, and testing procedures of the standpipe and hose system documented and up to date? Including inspection and testing of hoses if provided.	
Priority Level:	Low	
Non-Compliance Level:	1	



Description:	Inspection, maintenance, and testing procedures of the installed class II standpipe and hose is not documented and up to date.		
Source of Findings:	Document Review: No relevant document was observed during the time of document review.		
Suggested Plan of Action:			
Suggested Deadline Date:			
Standard:	Reference NFPA 25 Chapter 6 Standpipe and Hose Systems Table 6.1.1.2		
Question:	Are inspection, maintenance, and testing procedures of the fire pump documented and up to date?		
Priority Level:	Low		
Non-Compliance Level:	1		
Description:	Inspection, maintenance, and testing procedures of the fire pump are not documented and up to date.		
Source of Findings:	Document Review: No document regarding inspection, maintenance and testing procedure of fire pump was found among the documents shown by the factory personnel.		
Suggested Plan of Action:			
Suggested Deadline Date:			
Standard:	Reference NFPA 25 Chapter 8 Fire Pumps		
Means of Egress			
Question:	Aisles are provided with the minimum unobstructed clear width of 0.9 m (36 in) based on occupant loads.		
Priority Level:	High		
Non-Compliance Level:	3		
Description:	Aisle width at the 4th floor of the seven story ATPML building was found to be 24 inches and at 2nd floor of the four story ASKML building aisles widths are obstructed by wash basin and water filter. At other buildings minimum aisles width found sufficient.		
Source of Findings:	Photograph: At ATPML aisle width was found 24 inches and at ASKML obstructed aisles width was found.		
Suggested Plan of Action:			



Suggested Deadline Date:		
Standard:	Higher occupancy loads will require a greater width to accommodate the increased load. Alliance Standard Part 6 Section 6.5 Egress Width	
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:	There are collapsible gates and steel sliding doors with locking arrangements at each egress location.	
Source of Findings:	Photograph: Locking devices were found on exit doors.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	
Question:	Exterior exit stairs are separated from the building with the required rating. The rating of the exterior wall shall extend 3.05 m (10 ft) beyond the ends of the stair structure.	 
Priority Level:	High	
Non-Compliance Level:	3	
Description:	The external steel stairs of Apex Lingerie building, Apex Textile building and Apex Spinning and Knitting building are not fire separated from the adjacent building beyond 10 feet of its span as required.	
Source of Findings:	Photograph: Exterior exit stairs are not separated from the building with the required rating.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 6 Section 6.3.1.2. Three stories or less 1-hr rating. Four stories of more 2-hr rating	
Question:	Occupant loads on each level (floor) do not exceed the capacity of the available means of egress.	
Priority Level:	High	



Non-Compliance Level:	2
Description:	1) At Four story ASKML building maximum occupant was 730 on 2nd floor. On that floor total required width of Aisles is $730 \times 0.005 = 3.65\text{m}$, Exit is $730 \times 0.004 = 2.92\text{m}$, Stair is $730 \times 0.008 = 5.84\text{m}$. Total available width of Aisles is 12.74m, Exit is 5.35m, Stair (4 nos) is 5.96m. So occupant loads on each level (floor) do not exceed the capacity of the available means of egress. Also area per person computed on 2nd floor is 29.34 sft which is sufficient as per Alliance standard. 2) At Three story dying shed maximum occupant was 40 on 1st floor. On that floor total required width of Aisles is $40 \times 0.005 = 0.2\text{m}$, Exit is $40 \times 0.004 = 0.16\text{m}$, Stair is $40 \times 0.008 = 0.32\text{m}$. Total available width of Aisles is 2.1m, Exit is 1.8 m, Stair (2 nos) is 2.0 m. So occupant loads on each level (floor) do not exceed the capacity of the available means of egress. Also area per person computed on 1st floor is 81.86 sft which is sufficient as per Alliance standard. 3) At Seven story ATPML building maximum occupant was 1115 on 5th floor. On that floor total required width of Aisles is $1115 \times 0.005 = 5.57\text{m}$, Exit is $1115 \times 0.004 = 4.46\text{m}$, Stair is $1115 \times 0.008 = 8.92\text{m}$. Total available width of Aisles is 23.43m, Exit is 8.55 m, Stair (5 nos) is 8.87 m. So occupant loads on each level (floor) exceed the capacity of the available means of egress. Also area per person computed on 5th floor is 68.78 sft which is sufficient as per Alliance standard. 4) At Eight story chemical store building maximum occupant was 93 on 6th floor. On that floor total required width of Aisles is $93 \times 0.005 = 0.47\text{m}$, Exit is $93 \times 0.004 = 0.37\text{m}$, Stair is $93 \times 0.008 = 0.74\text{m}$. Total available width of Aisles is 3.6m, Exit is 2.25 m, Stair (2 nos) is 2.52 m. So occupant loads on each level (floor) do not exceed the capacity of the available means of egress. Also area per person computed on 6th floor is 69.30 sft which is sufficient as per Alliance standard. 5) At Six story Apex Lingerie building maximum occupant was 725 on 4th floor. On that floor total required width of Aisles is $725 \times 0.005 = 3.63\text{m}$, Exit is $725 \times 0.004 = 2.9\text{m}$, Stair is $725 \times 0.008 = 5.8\text{m}$. Total available width of Aisles is 15.34m, Exit is 4.97 m, Stair (3 nos) is 4.46 m. So occupant loads on each level (floor) exceed the capacity of the available means of egress. Also area per person computed on 4th floor is 43.83 sft which is sufficient as per Alliance standard. 6) At Four story corporate office building maximum occupant was 5 on 3rd floor. On that floor total required width of Aisles is $5 \times 0.005 = 0.025\text{m}$, Exit is $5 \times 0.004 = 0.02\text{m}$, Stair is $5 \times 0.008 = 0.04\text{m}$. Total available width of Aisles is 1.0 m, Exit is 5.35 m, Stair (2 nos) is 2.44 m, So occupant loads on each level (floor) do not exceed the capacity of the available means of egress. Also area per person computed on 3rd floor is 672 sft which is sufficient as per Alliance standard.
Source of Findings:	Visual Assessment: Number of occupants was counted on sample basis and obtained from register. Widths of exit doors and stairs of the concerned floor were measured.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 6 Section 6.4 Occupant Load



Question:	Exit discharge is directly to the exterior of the building, unless the requirements of 6.17.2 are met, at grade or provides direct access to grade. Exit discharge shall not reenter a building.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	One stair in four story ASKML building and one stair in seven story ATPML building are open to production floor, not to the exterior. Exit discharge of other buildings are directly to the exterior of the building.	
Source of Findings:	Photograph: One exit discharge each in the ASKML and ATPML buildings do not meet the exterior of the building.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 6 Section 6.17 Exit Discharge. See Section 16.7.2 and 16.7.3 for exceptions.	
Question:	All doors in a means of egress are of the side-hinged swinging type.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Some of the doors in the means of egress are collapsible and sliding types.	
Source of Findings:	Photograph: Collapsible, swing and sliding steel doors are found in all buildings.	
Suggested Plan of Action:		
Suggested Deadline Date:		
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:	2	
Description:	One stair in four story ASKML building and one stair in seven story ATPML building are open to production floor and discharge through a non-rated exit passageways. Exit discharge of other buildings are directly to the exterior of the building.	
Source of Findings:	Photograph: Interior exit stairways terminate at non-rated passageway in	



	different buildings.	
Suggested Plan of Action:		
Suggested Deadline Date:		
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:	Occupant loads are not posted in any assembly and production floor.	
Source of Findings:	Visual Assessment: Occupant loads are not posted in any assembly.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 6 Section 6.4.4 Posting of Occupant Load	
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:	None of the stairs have handrails on both sides in each building of factory premises.	
Source of Findings:	Photograph: No handrails are available on both sides of stairs.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 6 Section 6.9 Stairs and 6.12 Handrails and Guards	
Question:	All occupied roofs are provided with parapets or guards with a minimum height of 1067 mm (42 in.).	
Priority Level:	Medium	
Non-Compliance Level:	2	





Description:	Parapet height is found to be 29 inches in the four story ASKML building but the roof is unoccupied. At Seven story ATPML building area of 5th floor roof is 76700 sft and area of 6th floor is 21650 sft. So the 5th floor roof can be considered as occupied roof. Remaining open area at 5th floor roof is accessible and parapet is required. Provided parapet height was less than 42 in. Roof of the other buildings are unoccupied.
Source of Findings:	Visual Assessment: Parapet height of Seven story ATPML building was found less than 42 in.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 6 Section 12 Handrails and Guards
Question:	Emergency power for means of egress illumination is verified at least once per year. If battery operated lights are used, these lights are tested on a monthly basis. Functional testing of battery powered lights is provided for a minimum 90 min once per year.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Documentation of periodical testing of emergency power for means of egress were found. However, those documents were not in compliance with Section 10.12.2.3.
Source of Findings:	Document Review: Relevant documents are not in compliance with Alliance Standard.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standards Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape Lighting
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:	Illuminated exit signs are placed at entrances to exits, but along the path of egress additional exit signs or directional signs are not provided where there is a change in direction and where the continuation of egress is not obvious.
Source of Findings:	Photograph: Illuminated exit signs are placed at entrances to exits, but are not





	placed along the path of egress.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 6 Section 6.11 Exit Signs	
Question:	Emergency power for exit signs is tested at least once per year. If battery operated, these lights are tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No plan or record of conducting periodic test for the emergency battery backup for illumination of exit signs was found as required.	
Source of Findings:	Document Review: No document regarding testing of emergency power for exit signs was found among the documents shown by the factory personnel.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 10 Section 10.12 Illumination of Exit Signs and Means Of Escape.	
Question:	Every door in a stair enclosure serving more than 5 stories is provided with re-entry unless it meets the requirements of Alliance Standards Part 6 Section 6.8.3.1.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The main production buildings that are more than five stories are the eight story chemical store building, the seven story ATPML building and the six story Apex Lingerie building. Doors of these buildings are not provided with re-entry. Stair doors with re-entry are required in at least 2 floors.	
Source of Findings:	Visual Assessment: No re-entry doors are provided in the main building.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 6 Section 6.8 Doors and Gates	



Question:	Changes in elevation of walking surfaces do not exceed 6.35 mm (1/4 in) unless provided with a beveled slope of 1 in 2 that does not exceed 12.7 mm (1/2 in).	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	Change in elevation of walking surface is 3 inch at 5th floor east exit of ATPML building, which is not allowed as per Standards.	
Source of Findings:	Visual Assessment: Change in elevation found greater than 1/2 inch in 5th floor of ATPML building.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 6 Section 6.3.4 Walking Surfaces	
Question:	Exit signs have appropriate illumination levels and contrasting graphics.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Exit signs not have appropriate illumination levels and contrasting graphics in accordance with Alliance Standard, Part-10, Section-10.12.	
Source of Findings:	Photograph: Exit signs not have appropriate illumination levels and contrasting graphics.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 10 Section 10.12.1 Exit Signs	
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:	2	
Description:	Floor level mentioned but stair designation is not mentioned.	
Source of Findings:	Photograph: Improper stair designation signs available all through the buildings.	
Suggested Plan of		



Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 6 Section 6.9 Stairs	
Fire Safety Programs		
Question:	Are the required number of people trained and certified in fire fighting, first aid, and rescue training by the appropriate authority.	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	Only 1220 people are trained and certified in fire fighting, first aid, and rescue training by the fire service and civil defense. Total occupant was found 11824. So at least 2956 people need to be trained and certified.	
Source of Findings:	Document Review: Certificates of trained people are checked during document review.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 13 Human Element Programs	
Question:	An emergency evacuation plan has been developed and communicated to all employees.	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Workers are aware of the evacuation procedure upon commencing of the alarm. However, no procedure defining evacuation process was available.	
Source of Findings:	Document Review: Evacuation plan was unavailable.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	



Question:	Fire Drills are conducted at required intervals based on building use type.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Fire drills are conducted quarterly in all buildings but not under the direction of a Fire Safety Director.
Source of Findings:	Document Review: Fire drill was conducted on monthly basis.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standards Part 13 Section 13.3 Fire Drills
Question:	Storage areas underneath the cutting tables are clear of combustibles.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Fabrics stored underneath the cutting tables of cutting section on 2nd floor, 3rd floor and 4th floor of ATPML building and on 1st floor Apex lingerie building.
Source of Findings:	Visual Assessment: Combustibles was found underneath cutting table.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 17 Section 13.7.2 Cutting tables.
Question:	Training programs are implemented and documented in accordance with the Alliance Safety Training Curriculum.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	No record of training program is available in accordance with the Alliance Safety Training Curriculum on fire safety.
Source of Findings:	Document Review: Alliance safety training curriculum was not found among the documents shown by factory personnel.
Suggested Plan of Action:	
Suggested Deadline Date:	





Standard:	Alliance Standards Part 13	
Question:	A Fire Safety Director position has been filled.	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	No viable documentation or physical presence of Fire Safety Director noted. However, factory authority claims they have a designated person for Fire Safety Director.	
Source of Findings:	Document Review: No viable documentation of Fire Safety Director noted.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Question:	Fire Department pre-planning has been completed.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Fire Department pre-planning has not been completed yet.	
Source of Findings:	Document Review: No fire department pre-planning documentation was found.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 13 Section 13.1 Fire Safety Director	
Question:	Are all applicable permits up to date including Fire License & Boiler License.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Factory license and fire license were found up-to-date but chemical was stored longer than approved limit of the license.	
Source of Findings:	Document Review: Fire license and factory license were found up-to-date.	
Suggested Plan of Action:		
Suggested Deadline		

Factory Name: **APEX LINGERIE LIMITED**

Address: **Chandra, Shafipur, Gazipur Gazipur Dhaka Bangladesh**

Assessor: **Bureau Veritas**

Date: **16 Jun 2014**



ALLIANCE
FOR BANGLADESH WORKER SAFETY

Date:		
Standard:	Alliance Standard Part 13 Human Element Programs	
Question:	A written housekeeping policy is established and enforced.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	Written housekeeping policy was not found as required.	
Source of Findings:	Document Review: No document regarding housekeeping policy has been found among the documents shown by factory personnel.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 13 Section 13.6 Housekeeping	
Question:	A hot-work permit program has been established.	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	Hot-work was going on in the factory in the welding shed but hot-work permit program is not established as required.	
Source of Findings:	Document Review: Hot-work permit program was not found.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 13 Section 13.4 Hot Work Permit and NFPA 51B	