Date Visited: 11-Feb-14
Location Name: University of Houston - Victoria
Address: 2705 E. Houston Hwy
Victoria, TX  77901
United States

Commercial Property
Property Risk Improvement Report
Property Risk Improvement Report

LOCATION SURVEYED: University of Houston - Victoria
2705 E. Houston Hwy
Victoria, TX  77901
United States
28.810554 / -96.975669

FILE NUMBER: HSB140107000015

DATE OF SURVEY: 11-Feb-14
PREVIOUS SURVEY: 02-Dec-10

BROKER: Chris Connelly ARM
UNDERWRITER: Darlene Armstrong
RISK ENGINEER: Stephen T. Greeson, PE

ACCOMPANIED BY:

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genaro Cortez</td>
<td>Safety &amp; Risk Manager</td>
</tr>
<tr>
<td>John Burke</td>
<td>Facilities</td>
</tr>
</tbody>
</table>

DISTRIBUTION:

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Darlene Armstrong</td>
<td>Underwriter</td>
</tr>
<tr>
<td>Michelle Tooley</td>
<td>Senior Insurance Consultant</td>
</tr>
</tbody>
</table>
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SCOPE AND SUMMARY

RISK IMPROVEMENTS

NEW PROJECTS, SIGNIFICANT CHANGES AND OBSERVATIONS

SUPPORT SERVICES

RISK IMPROVEMENT DEFINITIONS

CUSTOMER SATISFACTION

The information contained in this report is intended for the express purpose of assisting AIG personnel in the management of an AIG insurance program. No warranty, guarantee, or representation, either expressed or implied, is made as to the correctness or sufficiency of any representation contained herein. This report may not address each and every possible loss potential, violation of any laws, rules or regulations, or exception to good practices and procedures. The absence of comment, suggestion, or recommendation does not mean the property or operation(s) is in compliance with all applicable laws, rules, or regulations, is engaging in good practices and procedures, or is without loss potential. No responsibility is assumed for the discovery and/or elimination of hazards that could cause accidents or damage at any facility that is subject to this report. Reliance upon, or compliance with, any of the information, suggestions or recommendations contained herein in no way guarantees the fulfillment of your obligations under your insurance policy or as may otherwise be required by any laws, rules or regulations.

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SCOPE AND SUMMARY

This facility was visited to undertake a risk assessment of the fire and associated perils for insurance purposes. The purpose of the assessment was to assist in the identification and mitigation of hazards and exposures that could lead to the loss or damage to assets or business interruption.

The buildings of this survey included 1, 2, and 3 stories totaling 242,500 square feet, having a predominant construction of ISO 1. The predominant occupancy is Colleges and Universities, NEC, State owned. Approximately 92% of the total area surveyed was fully installed with automatic sprinkler protection. The non-sprinkled Athletic/PCI building has a full automatic detection system as well as the residence halls. On-site management demonstrates a good attitude towards loss prevention as evidenced by compliance with past recommendations and excellent management programs.
During the risk assessment, a number of issues were raised and discussed at the closing meeting. The following Risk Improvements have been developed based on National and International Codes and Standards, best practice and/or sound loss control judgment. Implementation of these Risk Improvements will help to eliminate, mitigate or control potential losses.

Risk improvements have been proposed to assist you in reducing your exposures and managing your risk. Please ensure that you update AIG as you implement these risk improvements. If you need further assistance or want to discuss a particular risk improvement in greater detail, please contact your AIG Loss Prevention Engineering contact.

Risk Improvement Classification (Physical Protection only): To assist in complying with the Risk Improvements we have provided:

- Categorization by type for each risk improvement;
- Reduction in the loss potential once the Risk Improvement is completed

“Human Element” risk improvements: Studies consistently show that the root cause of 60-80% of incidents in the workplace can be attributed to a deficiency in management systems or some element of human error. Effective risk management programs are therefore a foundation of all good loss prevention strategies. At AIG we identify opportunities for improvements to risk management programs. We class these as “Human Element” risk improvements. A “Human Element” risk improvement is one for which no or very little capital expenditure is required. Given that these are good management practices that can contribute significantly to risk reduction we anticipate that these improvements would be implemented.

**COMPLETED RISK IMPROVEMENTS**

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-12-01</td>
<td>University West</td>
<td>Provide Protection of Hydraulic Fluid Operated Machinery</td>
</tr>
<tr>
<td>10-12-02</td>
<td>University West</td>
<td>Establish Inspection, Testing, &amp; Maintenance Program for Fire Dampers</td>
</tr>
<tr>
<td>10-12-03</td>
<td>University Center</td>
<td>Increase Frequency of Fire Alarm Testing</td>
</tr>
<tr>
<td>10-12-04</td>
<td>University West</td>
<td>Protect High Pressure Relief From Insect Intrusion</td>
</tr>
<tr>
<td>10-12-05</td>
<td>University Center</td>
<td>Establish A Formal Fire Protection System Impairment Program</td>
</tr>
<tr>
<td>10-12-06</td>
<td>All Campus Buildings</td>
<td>Establish A Formal Roof Inspection Program</td>
</tr>
<tr>
<td>10-12-08</td>
<td></td>
<td>Infared Thermographic Preventative Maintenance</td>
</tr>
</tbody>
</table>

Automatic sprinkler protection has been installed in the room containing hydraulic equipment.

Dampers are now inspected and tested.

There is a program for weekly booster fire pump churn testing and fire alarms tested semi-annually.

The opening has been protected.

Implemented the AIG fire protection impairment procedure to monitor impairments to the fire protection equipment.

Monthly inspections are completed with additional inspections prior to a hurricane.

The local energy provider, AEP, has provided this service in 2013. Also, the university has only dry type transformers.
# HUMAN ELEMENT RISK IMPROVEMENTS

## 10-12-07  Library: Establish A Hurricane Preparedness Plan That Protects Special Collections

**Summary:**
There are currently no established plans for the protection of Special Collections in the event of blown-out windows during a hurricane. Management should study and implement a plan to cover the windows of the Special Collections area and move collections as far as practical from the window area. Library staff should establish a plan for the preservation of the Special Collections if damaged by water so that damages are not increased post hurricane.

**Details:**
Losses can be greatly reduced with a proper employee response and preparedness.

**Response:** Management continues to work on a plan.

## 14-02-01  Athletic/PCI Building-Housekeeping

**Summary:**
Management should mark the floor designating the area where storage is not allowed in the vicinity of electrical panels, train employees to adhere to this standard, and inspect for compliance on a regular basis.

**Details:**
Combustible materials were noted to be accumulated adjacent to the electrical panels located in the janitor room. The combustible materials create a fuel load for a fire as well as create an obstruction to ready access to the breakers. Per the *National Electrical Code* (2014ed) section 110.24(B), the area in front of electrical breaker panels should not be used for storage. The dimensions of the space to remain clear per section 110.26(A) for panels carrying 0-150volts where no objects (including temporary storage) in front of electrical panels is a minimum of 3 feet and a minimum width to be the width of the equipment/panels or 2.5 feet, whichever is greater.

**Response:**
Management agreed to implement.
### PHYSICAL PROTECTION RISK IMPROVEMENTS

<table>
<thead>
<tr>
<th>10-12-09 University Center: Provide Fully Completed Nameplate(s) For Sprinkler System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
</tr>
<tr>
<td>Summary: Management should:</td>
</tr>
<tr>
<td>1) Contact the installing contractor to provide a properly completed nameplate.</td>
</tr>
<tr>
<td>If the contractor is not available, then,</td>
</tr>
<tr>
<td>2) Review the As-Built drawings and/or Hydraulic Calculation results. Post the information.</td>
</tr>
<tr>
<td>3) When nameplate information is determined, have a licensed contractor properly complete the nameplate and post at or near the sprinkler system riser.</td>
</tr>
<tr>
<td>The resulting information should be placed per NFPA 13 (2010 edition) Standard for the Installation of Sprinkler Systems section 24.5.2 on a permanently marked weatherproof metal or rigid plastic signs. The signs should be secured with corrosion-resistant wire, chain, or other approved means to the riser. The sign should include the following information:</td>
</tr>
<tr>
<td>(1) Location of the design area or areas</td>
</tr>
<tr>
<td>(2) Discharge densities over the design area or areas</td>
</tr>
<tr>
<td>(3) Required flow and residual pressure demand at the base of the riser</td>
</tr>
<tr>
<td>(4) Occupancy classification</td>
</tr>
<tr>
<td>(5) Hose stream allowance included in addition to the sprinkler demand</td>
</tr>
<tr>
<td>(6) Name of the installing contractor</td>
</tr>
<tr>
<td>Details: The sprinkler system nameplate (also known as a placard) is affixed to the fire pump controller. However, the nameplate was not properly completed and had missing required information. The nameplate is used by management and fire protection professionals to compare the sprinkler system requirements to the water supply in order evaluate and verify sprinkler performance. It has been a requirement of NFPA 13 <em>Standard for the Installation of Sprinkler Systems</em> for many years for the sprinkler system installer to provide the placard from the results of their hydraulic calculations when they gained approval for the system installation.</td>
</tr>
<tr>
<td>Response: Management continues to work on acquiring this information.</td>
</tr>
</tbody>
</table>
14-02-02 Jaguar Suites - Wall Opening

**Category** | Important
---|---

**Summary:**
Contract a state licensed company to repair the walls of the laundry room so that it has a fire rating of no less than 1-hour.

**Details:**
The missing sheetrock and non-taped/floated openings reduce the fire resistance rating of the laundry room such that other areas of the building are exposed to loss. The laundry room is considered a higher hazard than other areas of the building and therefore from a property protection standpoint should be maintained as a smoke compartment. Per NFPA 5000 (2012ed) *Building Construction and Safety Code*® section 25.3.2.2, separation from the remainder of the building by fire barriers having a fire resistance rating of not less than 1hr in this room with existing automatic sprinkler protection should be maintained.

Management should also verify that the lint collection system is listed for the current application so that the laundry room maintains a 1-hour fire resistance rating.

**Response:**
Management agreed to implement.

14-02-03 Jaguar Hall - Hood Openings

**Category** | Important
---|---

**Summary:**
Management should seal or otherwise make grease-tight penetrations in the kitchen hood by sealing them with devices that are listed for such use and whose presence does not detract from the hood’s or duct’s structural integrity per NFPA 96 (2014ed) *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations* section 5.1.5. If welded, the weld should be formed smooth or ground smooth so as to not trap grease and is cleanable per section 5.1.3.

**Details:**
Holes left in the kitchen hood by the removal of the old automatic extinguishing system allow grease laden vapors to deposit in the duct area increasing the fire hazard.

**Response:**
Management agreed to implement.

14-02-04 Jaguar Hall - Temporary Wiring Substituted for Permanent Wiring

**Category** | Important
---|---

**Summary:**
Contract a state-licensed electrician to provide an approved electrical outlet within proximity to the electrical utilization equipment so that the manufacturer provided power cord can reach the approved electrical outlet.

**Details:**
In the utility corridor there is an electrical extension cord used as a substitute for permanent wiring. The use of an extension cord increases the potential for fire due to the increased electrical resistance and potential for electrical short circuit at the connection. Per the *National Electric Code* (2014ed) article 400.8, extension cords should not be used as a substitute for permanent wiring.

**Response:**
Management agreed to implement.
### 14-02-05 Residence Halls - Unattended Cooking

<table>
<thead>
<tr>
<th>Category</th>
<th>Advisory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary:</td>
<td>For those resident halls that have a community stove it is recommended that a UL listed device that de-energizes the stove be installed and that the device include one or a combination of the following:</td>
</tr>
<tr>
<td></td>
<td>• a manual timer (i.e. commonly found in bathroom heating lamps and Jacuzzi's)</td>
</tr>
<tr>
<td></td>
<td>• a motion sensor</td>
</tr>
<tr>
<td></td>
<td>• an automatic timer that begins when a person leaves the cooking area</td>
</tr>
<tr>
<td>Details:</td>
<td>Cooking material left unattended or forgotten is a common ignition source which exposes the entire building to damage.</td>
</tr>
<tr>
<td>Response:</td>
<td>Management agreed to review.</td>
</tr>
</tbody>
</table>

### 14-02-06 Facilities Maintenance Shop - Exposed Combustible Insulation

<table>
<thead>
<tr>
<th>Category</th>
<th>Advisory</th>
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</thead>
<tbody>
<tr>
<td>Summary:</td>
<td>Management should contract a state licensed company to remove the expanded polyurethane/polystyrene foam insulation from the walls and ceiling of the Facilities Maintenance Shop section. A less desirable alternative is for management to consult the local building codes and the latest edition of NFPA 5000 Building Construction and Safety Code to chose the more restrictive means to separate the building interior from the foam plastic insulation by an approved thermal barrier. Per NFPA 5000 (2012 edition) section 48.3.3.1, an approved thermal barrier of ½ in. gypsum wallboard or equivalent material that will limit the average temperature rise of the exposed surface to not more than 250 degrees Fahrenheit after 15 minutes of fire exposure complying with the standard time-temperature curve of NFPA 251 should be installed.</td>
</tr>
<tr>
<td>Details:</td>
<td>Foam plastic insulation when ignited burns rapidly and produces intense heat, dense smoke, and gasses that are irritating, flammable and toxic. The thermal decomposition consists of carbon monoxide, benzene, toluene, oxides of nitrogen, hydrogen cyanide, and other toxins that hamper manual firefighting efforts, provides fuel for flashover, as well as deposit on other areas of the building and contents. From a fire protection perspective, the presence of unrated foam plastic may lower the construction grade of the building.</td>
</tr>
<tr>
<td>Response:</td>
<td>Management will review.</td>
</tr>
</tbody>
</table>

### NEW PROJECTS, SIGNIFICANT CHANGES AND OBSERVATIONS

It is important to involve your insurer in new projects, such as refitting, refurbishment, extension work, new builds or re-locating to a new site. Failure to do so could result in using non-approved construction materials (even though they meet local Building Codes and Fire Regulations) or inadequately protected facilities which could lead to expensive retrospective additions or rework. The Loss Prevention Engineering team at AIG can assist you with this by providing you with engineering support both before and during your project. Please contact us before you commence your project to ensure that we can arrange a consultation with one of our engineers.
RISK IMPROVEMENT PHOTOS

Jaguar Suites - Laundry

Jaguar Hall - Kitchen Hood

Jaguar Hall - Utility Corridor

Athletic/PCI - Janitor Room
Community Area in Jaguar Suites - Res. Stove

Facilities Maintenance Shop - Exposed Insulation
SUPPORT SERVICES

Fire Protection Impairments: All fire protection impairments (i.e. sprinkler systems, fire pumps, water supplies) should be reported to AIG by phone or email as indicated below:

Impairment Email: GlobalProperty.Impairment@aig.com
Impairment Phone: 877-705-7287

Ordering Resource Material: Resource material, including Hot Work Permits, Fire Protection Impairment Tags and Fire Protection Inspection Programs, should be ordered as indicated below. Other material is available through your Account Engineer.

Resource Email: GlobalProperty.Impairment@aig.com

Lexington Insurance Company Webcasts: Our Lexington website provides clients with Audio and Webcast Series (LexCasts) which focus on significant issues relevant to insurance and risk management. In addition this site provides clients with Natural Catastrophe resources, links, articles and informational bulletins. The Lexington website can be viewed by clicking on the following link: http://LexingtonInsurance.com/pgCATcenter.php

Risk Tool: Risk Tool is an on-line loss control resource presented by AIG. Please contact your Account Engineer to become registered. A RiskTool Demo can be reviewed by clicking on the following link: http://www.risktool.com

Account Engineer: The Account Engineer managing loss control for your account is:

Name: Ken Dunn, PE
Company: AIG
Phone: 770-671-2447
Email: kenneth.dunn@aig.com
RISK IMPROVEMENT DEFINITIONS

Our Risk Improvement opportunities have been classed as either “Human Element” or “Physical Protection” improvements. These are defined as follows:

• A Human Element risk improvement typically relates to procedures and management programs and will not normally involve, or will have limited, capital expenditure.
• A Physical Protection risk improvement is associated with provision of physical plant and equipment; typically there could be a capital expenditure associated with these improvements.

Category Definitions:

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Critical</td>
<td>Serious deficiencies or conditions that create an immediate &amp; severe potential for loss. These deficiencies represent conditions that are serious enough to affect the overall fire safety of the facility. Deficiencies of this nature require immediate attention by the insured, with either full compliance or reasonable mitigation of the exposure.</td>
</tr>
<tr>
<td>2 - Important</td>
<td>Deficiencies that do or may cause a loss. These are recommendations to correct uncontrolled exposures or to achieve and maintain a reasonable level of property protection. These recommendations require commitment on the part of the insured to change or modify conditions or work practices in order to reduce the potential for serious loss, resulting from either frequency or severity of events.</td>
</tr>
<tr>
<td>3 - Advisory</td>
<td>Deficiencies, minor in nature that are not expected to contribute significantly to a loss but do represent or could contribute to unsafe conditions or unsafe acts. These are recommendations that are considered best practices to enhance the level of property protection. Although compliance with these recommendations improves the risk and reduces the likelihood of a loss occurring from the recognized hazard or situation, they are considered desirable and not mandatory in nature.</td>
</tr>
</tbody>
</table>

Loss Expectancy Definition:

The loss expectancies outlined in the Risk Improvements assume that the existing protection and notification functions, whether it is adequate for the occupancy or not. This includes both public and private protection. Fire department response is also anticipated.

Estimated Cost to Complete**

Where provided, the estimated costs to complete are indicative costs only and not an exhaustive analysis. Its purpose is to distinguish between all recommendation costs on a relative basis which highlight the difference between maintenance and capital improvement costs. Before proceeding with the commissioning of any work, several quotes from qualified and licensed contractors are advised.

CUSTOMER SATISFACTION

We would welcome any feedback that you may have regarding this report or risk engineering services in general and would ask you to direct this to the following email address: GlobalLossPrevention@aig.com.