Don’t Get Blown Away: Mitigation Measures to Minimize Losses in Catastrophic Events for Commercial Business

Track: Producer
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Objectives
- Review the importance of a hazard vulnerability assessment
- Assess key mitigation strategies
- Identify the key components of a disaster recovery and business continuity plan
- Address ongoing facility assessments and maintenance

Mitigation strategies
- All starts with your HVA
- Review what went wrong during similar disaster events
- Electronic data backup and access
- Emergency communications
- EOP: No Primary Power, No Phone, No Internet, and No Water (may also include No Waste Water Treatment)

Mitigation strategies
- Vendor agreements and MOU’s
- Employee/ vendor credentialing and site security
- Accounting documentation
- Get help to manage the loss during continued operations
- Temporary space

Mitigation strategies
- Building site design considerations
- Building envelope considerations
- Redundant primary power
- Emergency power considerations
- Eliminate critical operations and equipment from basement areas

Mitigation strategies
- Redundant primary power
  - Main feeder and secondary feeder come from separate substations
  - Main feeder and secondary feeder not run on the same transmission line path
- Emergency power
  - Stationary generator required or,
  - Emergency generator connection
Design development

- Building envelope considerations
  - High wind
    - The most common types of damage in descending order of frequency:
      - Roof covering damage
        - Roof membrane
        - Rooftop mechanical, electrical, and communications equipment
      - Glazing
      - Cladding
      - Structural system

Edge system failure. The lack of adequate edge system design and poor installation methods can result in the removal of the metal edge components, roof covering and even the wood nailers.

Windows lost to wind borne debris

Photovoltaic Panels (PV's) present a new issue with respect to wind uplift

Before high wind exposure

After high wind exposure

Wind damage to rooftop equipment
Preparedness strategies

- Electronic data backup and access
- EOP
  - Drill often
  - Monitor storm conditions
  - Pre-storm building envelope assessment
  - Pre-storm grounds, including storm water drain and catch basin assessment
  - Monitor temporary sediment controls

Preparedness strategies

- Electronic data backup and access
  - The mirror data center should not be located in the same geographical region
  - Don’t locate data centers and phone switches in below grade areas
  - Don’t expose data centers and phone switches to exterior windows unless they are protected
  - Keep access to paper forms

Response and recovery strategies

- Employee / vendor credentialing and site security
  - Are you employees credentialed?
  - Are your vendors credentialed?

Response and recovery strategies

- Accounting documentation
  - Setup separate accounting codes to track loss expenses
  - Maintain 12-24 months of business income reports (financials)
  - Up to date asset run per department
  - Process equipment vendor contact list

Response and recovery strategies

- Get help to manage the loss during continued operations
  - Consider the following drop-in team to assist your facility during a loss
    - Accountant
    - Facility engineer
    - Risk manager
    - Safety officer
  - Your facility staff already have a full time job running the day to day operations
  - The drop-in team can assist with managing the loss

Response and recovery strategies

- Vendor agreements and MOU’s
  - In addition to contracts with your local vendors, overlay national vendors to assist in a disaster event
    - Local vendors and their employees may be effected during the disaster event
    - National vendors will stage assets outside the target area prior to the event
Response and recovery strategies

• Building envelope evaluation

Roof systems should be checked for damage.

Response and recovery strategies

• Building envelope evaluation
  — Repairs to the roof systems should be done by a qualified contractor and inspected by third party to ensure a proper repair has been completed
  — Roof repairs not done adequately resulted in several failures during Sandy
  — Several roof repairs done after Sandy were found not to be done adequately

Business continuity

• Impact assessment
• Recovery strategy
• Proven / tested capability
• Business culture

Business continuity

• Impact assessment
  — Is there a clear understanding / definition of the critical activities that would have a significant impact on output / profit if disrupted?
    • Examples:
      • Key machinery
      • Bottleneck process
      • Critical utility
      • High dependence on a raw material / ingredient
      • Key supplier

Business continuity

• Recovery strategy
  — Examples:
    • Outsource production to a third party
    • Transfer production to a sister operation
    • Utilize spare production capacity elsewhere on site
    • Call off buffer stock

Business continuity

• Proven / tested capability
  — To what lengths has the company gone to demonstrate the credibility of alternative arrangements?
    • Examples:
      — Formal / informal agreements with third parties
      — Confirmed / documented supplier lead times (replacement equipment)
      — Set-aside capacity
      — Minimum buffer stock levels
      — Track record (done it before in a real incident)
      — Documented scenario testing
Business continuity

• Business culture
  – What broader business issues might influence decision making following a disruption?
  • Examples:
    – Market dynamics
    – Business drivers
    – Experience of management / leadership / business acumen
    – Track record (done it before)
    – Level of support from Group

Summary

• Review the importance of a hazard vulnerability assessment
• Assess key mitigation measures
• Identify the key components of a disaster recovery and business continuity plan
• Address ongoing facility assessments and maintenance

Questions

Thank you