

A Structured Approach to Develop an Effective Emergency Preparedness and Disaster Response Plan for Contractors

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Introduction

- Expansion of technology in the workplace and the interdependencies of business operations makes the country vulnerable to business disruption at the time of disaster
- Disasters (natural or otherwise) beget the need to have a written, comprehensive, and tested emergency preparedness plan
- As many different events can disrupt a contractor's business operations; contractors who properly plan and prepare for threats improve the odds for a successful response and recovery

Background and Rationale

Types of Emergencies & Disasters

- Emergencies are local in nature and response
- Disasters have a broader geographic scale and complexity, or require a regional/ federal response
- Emergencies and disasters sub-classed
 - naturally-occurring
 - man-made
- Contractors should look beyond the obvious threat
 - 248 man-made disasters vs. 149 naturally occurring disasters in 2005

Background and Rationale (contd..)

Impact of Emergencies & Disasters

Human Impact

- Risk of personal injuries and/or fatalities
- Short-term workforce absenteeism leading to service disruptions
- Outright attrition of workers due to fear, poor morale, or lack of confidence in the company's financial stability

Background and Rationale (contd..)

Impact of Emergencies & Disasters

Financial Impact

- Lost financial data
- Additional expenses due to relocation of operations and replacement of equipment
- Cash flow crisis, or even bankruptcy, due to customer's inability to pay
- Loss of bonding capacity
- Breach of contract, assessed liquidated damages, or default

Background and Rationale (contd..)

Impact of Emergencies & Disasters

The Solemn Upside

- Emergencies and disasters can also present opportunities to contractors as unexpected sources of work
- sudden influx of business is attractive – yet, these positives are offset by risks of cost escalation and the threat of slow, partial, or disputed reimbursements

Background and Rationale (contd..)

Benefits of Emergency Preparedness Plans

- Protects the lives of employees and the welfare of their families
- Reduces business disruptions
- Maintains sustainable cash flows
- Preserves customer bases
- Continues supply of services and products
- Maintains confidence of investors or creditors
- Mitigates legal liability
- Maximizes insurance recovery and reduces the total cost of risk

Research Objectives

- To provide a structured approach to develop an effective disaster and emergency preparedness plan for a contractor, which is also tailored to fit its business operations.
- To provide a mechanism for a contractor to evaluate its company's emergency preparedness and create policies to ensure business continuity after a disaster.
- To provide recommendations to contractors for developing effective project-specific emergency preparedness plans.

Research Methods

- Support data was collected via interviews of general contractors and sub contractors in the State of Florida, USA
- Objective of the interviews were to explore the emergency preparedness practices being followed and compile recommendations from contractors

Research Results

Nuts & Bolts of the Plan

- One needs an emergency preparedness plan tailored to fit his/ her business operations
- It is crucial to identify company's critical business functions to restore and resume business operations in the event of a disruption
- It is important to evaluate one's company's vulnerability to a disruption in supply chain logistics

Research Results

Five Steps to Developing an Effective Emergency Preparedness Plan

Steps to help a contractor evaluate its emergency preparedness and create policies to ensure continuity after a disaster

1. Conduct a Needs Assessment
2. Establish a Planning Team
3. Perform a Vulnerability Assessment
4. Analyze the Business Impact of Disruptions
5. Take Preventive Measures

Five Steps – Step One

Conduct a Needs Assessment

A comprehensive needs assessment includes answering these questions:

- Does the company have a formal, written emergency preparedness plan?
- Is this plan up-to-date?
- Has the company thoroughly tested the plan on all levels?
- Does the plan include the following critical elements?

Five Steps – Step One

Conduct a Needs Assessment

- Vulnerability Assessment
Identifies and measures “soft spots” and prioritizes planning action steps.
- Business Impact Analysis
Qualifies the effect of a disaster on the company’s day-to-day operations.
- Evacuation Procedures
Identifies routes to safety, establishes a meeting point for evacuees, and explains how to determine if anyone is missing.
- Business Continuity Plan
Details the means to restore critical business operations and resume operations
- Crisis Management Plan
Outlines how to coordinate communication protocols with the media and other external organizations.

Five Steps – Step Two

Establish a Planning Team

A comprehensive needs assessment includes answering these questions:

- Composition of this team or task force will vary depending on size, geographical spread, and nature of operations
- representatives from company’s insurance agency to participate as *ad hoc* members can provide resources

Five Steps – Step Three

Perform a Vulnerability Assessment

A clear idea can be developed of the dangers to the company’s continuity after a disaster using the following steps

- Identify top 10 most likely emergencies and disasters
 - Assess the probability of each top 10 event. Rate each scenario as a high, medium, or low frequency event
 - Assess and rate the severity of each top 10 event
 - Reorder the top 10 list by probability and severity
- Once the list is completed, focus on mitigating the impact of high frequency and high severity events can be made

Five Steps – Step Four

Analyze the Business Impact of Disruptions

- An optional step with a major impact on organizational decision-making
- business impact analysis calculates economic impact of direct and indirect costs from different types and variable durations of unplanned disruptions
- Also expressed as the *cost-per-down-day*.

Five Steps – Step Five

Take Preventive Measures

- Identify staff capabilities to respond to first aid and medical emergencies or for bilingual translation.
- Cross-train staff in key competencies.
- Maintain contact with employees and essential business partners through an emergency website or toll-free phone number.
- Consider the cost-benefit of satellite phone service in the event that conventional phone and cell service is disrupted.

Five Steps – Step Five

Take Preventive Measures (contd..)

- Ensure all critical materials or supplies are not stockpiled in the same area and are garaged in different areas.
- Identify backup suppliers.
- Maintain redundant systems, such as IT data and financial archives.
- Develop lists of key business partners, including company's banker, insurance and surety contacts, vendors, and customers.

Elements of Emergency Preparedness Plans

- Will vary based on areas of vulnerability and the company's size and operations
- All plans should contain:
 - Purpose and policy statement
 - Authority, roles, and responsibilities
 - Probable emergencies
 - Vulnerability assessment
 - Emergency operations center staffing and procedures
 - Communications protocols
 - Business continuity protocols
 - Crisis communication and media relations
 - Facility site maps and evacuation procedures
 - Internal and external resource lists

Project-Specific Emergency Preparedness Plans

- For many contractors, the need for emergency response and evacuation at a jobsite is more probable than for a widespread company disaster
- Pre-planning with local public safety and emergency response agencies can decrease confusion
- Some additional considerations for jobsite emergency preparedness plans:
 - Train employees in first aid; also, teach them to distinguish when 911 or other emergency services are warranted.
 - Establish written procedures for suspending/ securing crane operations, steel and pre-cast erection, and other work in high winds or electrical storms. This should include air horns or other audible signals to notify workers of impending storms.

Project-Specific Emergency Preparedness Plans

- Some additional considerations for jobsite emergency preparedness plans (contd.):
 - Institute proper procedures for utility location and damage prevention for underground and overhead utility construction operations.
 - Provide personal flotation devices and water lifesaving equipment for employees working over or near water.
 - Pre-plan with emergency agencies for: the response, rescue equipment, and procedures to be used for excavations cave-ins, confined spaces, high voltage contact, and scaffolding or crane boom collapses.
 - Develop aerial rescue procedures to retrieve injured or stranded workers from elevated work platforms or from lift equipment
 - Maintain appropriate staging areas for medical transport helicopters responding to a mass-casualty jobsite event.

Conclusions

- Based on emergency preparedness information, decision-makers may prepare better plans for emergencies
- A mechanism has been proposed to evaluate a company’s emergency preparedness and create policies to ensure business continuity after a disaster
- The research also provides recommendations for effective project-specific emergency preparedness plans

Thank you
