



Emergency Management Issues Special Interest Group Annual Meeting

Risk Management in Depressed Economies

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May 2-5, 2011 Charleston Marriott • Charleston, South Carolina



Budget vs. Risk Balance

- Reduced site budget starts with distribution
- Recognized tools of risk analysis
 - BNA
 - Safety Basis
 - Preferred or Popular Services
- Documented & Credible
- Who is Signing for the Identified Risk?

Baseline Need Assessments

- 3 Year Revision Requirement
- National Fire Protection Association (NFPA) 1710 Equivalency for Many DOE Fire Departments
- Technical Analysis of Hazards
 - Bounding Conditions
 - Fire Hazards Analysis
 - Safety Analysis Documentation
- Match Staffing to Analysis

Establishing Bounding Conditions

- Impractical & Not Economical to Staff for all Scenarios
- Statistical Analysis of Response Data to Support Bounding Conditions (performance)
- Probability of Occurrence vs. Risk
or
Consequence of unmitigated event (public opinion)

Bounding Conditions

General

- Fire development limited to 10% of the potential fire area or a two-room fire with a high confidence level of extinguishment.

Site / Facility Specific

- Sprinklered area
- Sufficient fixed suppression to prevent flashover
- Hose lengths \leq 300' for final extinguishment
- Fire water runoff and smoke mitigation after extinguishment
- Time Requirements

Bounding Conditions

General

- A single incident with a single casualty requiring EMS support.

Site / Facility Specific

- Fire fighting and EMS operate concurrently
- EMS coverage for responders remains after the 1st patient is transported off-site
- Mutual Aid as primary or supplemental
- Time Requirements

Bounding Conditions

General

- Fire flow capability of two hose lines capable of delivering a total of 400 gpm within 20 minutes for an unsprinklered facility.

Site / Facility Specific

- 400 gpm with two hose lines in 20 minutes (SRS)(Pantex minimum 200gpm per line)
- 300 gpm with $\leq 300'$ of deployed hose for a sprinklered area within 10 minutes of arrival on scene (Y-12)
- Application of extinguishing agent within 8 minutes of alarm (RFTS)

Risk Assumption

- Must relate code driven requirements to staffing.
- Risk must be quantified to address Unresourced Work Scope and Required Risk Acceptance.
- Impacts to Fire Fighting operations based on Minimum Staffing Reduction Scenarios
 - Life / Property / Environment
 - Offensive vs. Defensive

Minimum Staffing Matrix

Step	Day / Rotating	Property	Personnel	Environment	Offensive	Defensive	TMI
BNA Full	22 / 22	Full	Full	Full	Full	Full	Full
Current	18 / 14	Full	Full	Full	Limited <300' Hose Line	Full	Limited 90%
(-1) from rotating shift No 2 nd Pumper	17 / 13	Limited Sprinkler Support not provided for 30% of buildings	Full	Full	Limited <300' Hose Line	Full	Limited 90%
(-2) from rotating shift No 2 nd Pumper No Staging	16 / 12	Limited Sprinkler Support not provided for 30% of buildings	Limited No accountability or incoming responder briefing	Limited Inefficient resource assignments would delay environmental defensive tactics	Limited <300' Hose Line HazMat Level- A not Possible during off shift	Full	Limited 90%
(-2) from rotating shift (-2) from day No 2 nd Pumper No Staging No Decon Team	14 / 12	Limited Sprinkler Support not provided for 30% of buildings	Exposure Risk No accountability or incoming responder briefing Delays in responder and victim decon No hot zone rescue	Groundwater & Runoff Risk Inefficient resource assignments would delay environmental defensive tactics Emergency decon activities without collection or diking	Limited <200' Hose Line HazMat Level- A not Possible during off shift	Limited to Exposures	Limited 85%
(-2) from rotating shift (-4) from day No 2 nd Pumper No Staging No Decon Team	12 / 12	Limited Sprinkler Support not provided for 30% of buildings	Exposure Risk No accountability or incoming responder briefing Delays in responder and victim decon No hot zone rescue	Groundwater & Runoff Risk Inefficient resource assignments would delay environmental defensive tactics Emergency decon activities without collection or diking	Limited <200' Hose Line HazMat Level- A not Possible	HazMat Level- A not Possible Limited <200' Hose Line	Limited 80% Very Limited Maintenance

Minimum Staffing Analysis

- Labor costs represent 90% of most budgets
- Document and share your analysis
- Performance test your assumptions
- Know your audience
- Present in Lay Terms
- Prepare for “what if” questions
- Know your budget (all year long)

Balancing Risk & Funding

Fire Department Management Provides

- An objective evaluation of conditions and relative risk
- Staffing / Equipment needs
- Consequence of the reduced budget

With competitive budgets, all of us will be or have been challenged with this dilemma.

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EMERGENCY MANAGEMENT ISSUES
SPECIAL INTEREST GROUP

Questions Discussion

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