Emergency Management Programs NFPA 1600 vs. DOE
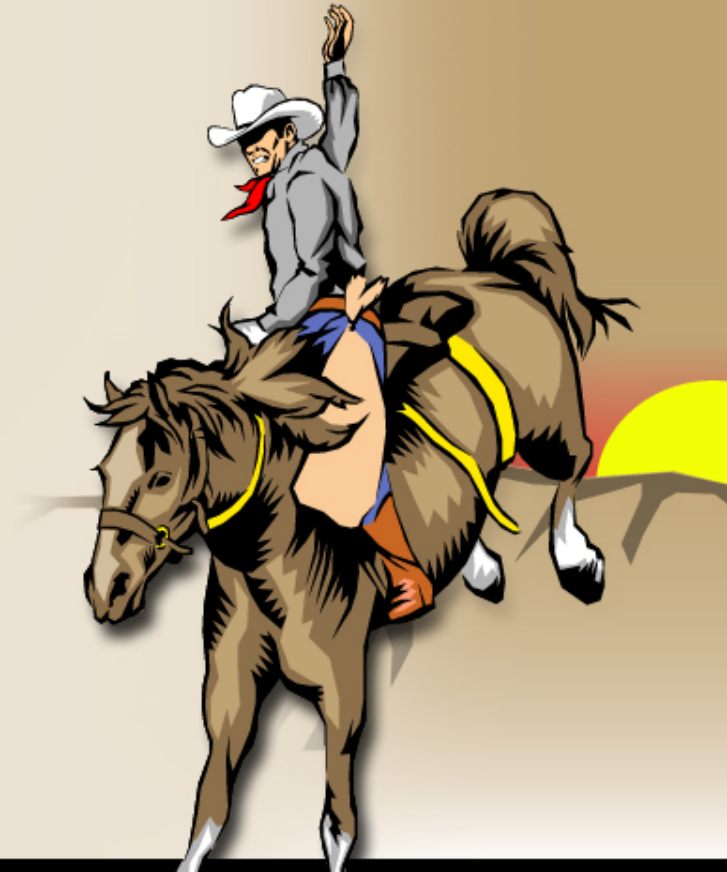
Dr. Jim Powers

David Freshwater

NA-41

EMI SIG

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Purpose

- Compare general criteria of an NFPA 1600 emergency management program with a DOE O 151.1C program

  - Which, if any, NFPA 1600 criteria are not covered by DOE programs?

**Emergency Management Program
NFPA 1600**

- <u>**Standard**</u>**:**
  - **NFPA 1600,** *Standard on Disaster/ Emergency Management and Business Continuity Programs (2007)*

- <u>**Guidance**</u>**:**
  - **NFPA 1600,** *Annex A*

**Emergency Management Program
DOE**

- **<u>Order</u>:**
  - **DOE O 151.1C, Comprehensive Emergency Management System**

- **<u>Guidance</u>:**
  - **DOE G 151.1-1A, Emergency Management Guide (EMG)**

Emergency Management Program
NFPA 1600

- Establishes a *common set of criteria* for disaster/emergency management programs
- Covers (**entities**):
  - Government at distinct levels (e.g., federal, state/provincial, territorial, tribal, indigenous, and local level);
  - Business and industry;
  - Nongovernmental organizations; and
  - Individual citizens

Emergency Management Program
NFPA 1600

- Provides criteria to:
  - Assess current emergency management programs
  - Develop, implement, and maintain aspects for
    - Prevention
    - Mitigation
    - Preparation
    - Response
    - Recovery

Emergency Management Program
DOE

- Framework for development, coordination, control, and direction of all emergency planning, preparedness, readiness assurance, response, and recovery actions.

- Effectively integrate planning, preparedness, response, and recovery activities for a comprehensive, all-emergency management concept.

- Covers (*entities*):
  - Facilities/Sites
  - Activities (Transportation)

Emergency Management Program
ACTIVITIES

NFPA

- **Prevention** - Avoids an incident or stops an emergency from occurring

DOE

- *(No formal activities/plan)*

Emergency Management Program
ACTIVITIES

NFPA

- **Mitigation** - Reduces the severity or consequences of an emergency.

DOE

- *(No formal activities/plan – Limited use suggested for Hazard Assessment planning efforts)*

EXPECT THE UNEXPECTED

Emergency Management Program
ACTIVITIES

NFPA   **DOE**

- **Preparation** - Supports the prevention of, mitigation of, response to, and recovery from emergencies (prior to an incident)

Preparedness

- **Response** - Manages the effects of an incident that threatens life, property, operations, or the environment

Response

EXPECT THE UNEXPECTED

Emergency Management Program
ACTIVITIES

NFPA

DOE

- **Recovery** - Returns conditions to a level that is acceptable to the entity

Recovery

EXPECT THE UNEXPECTED

Emergency Management Program
PROGRAM ELEMENTS

NFPA

- ***Program Administration***
- Laws and Authorities
- Risk Assessment
- Incident Prevention
- Mitigation
- Resource Management and Logistics
- Mutual Aid/Assistance
- Planning
- Incident Management

- Communications and Warning
- Operational Procedures
- Facilities
- Training
- Exercises, Evaluations, and Corrective Actions
- Crisis Communications and Public Information
- Finance and Administration

Emergency Management Program
PROGRAM ELEMENTS

DOE

- Hazards Survey/Hazards Assessment (*Airborne release*)
- *Program Administration*
- Training and Drills
- Exercises
- Readiness Assurance
- Emergency Response Organization (ERO)
- Offsite Response Interfaces
- Emergency Facilities and Equipment

- Emergency Categorization and Classification
- Notifications and Communications
- Consequence Assessment
- Protective Actions and Reentry
- Emergency Medical Support
- Emergency Public Information
- Termination and Recovery

Emergency Management Program
General Assessment Observations

- The comparisons (in the handout version) between NFPA and DOE program criteria do **not** represent a <u>detailed</u> point-by-point assessment

- In making comparisons, no distinction was made between requirements and guidance

- The interpretations of NFPA criteria are limited by the general nature of the standard and annex information

- While DOE Hazards Survey addresses all hazards, the Hazards Assessment focuses detailed analysis primarily on ***airborne release of a hazardous material***

- An NFPA criterion designated **N/A** in DOE indicates no explicit reference in DOE O 151.1C or its guidance

NFPA Risk Assessment versus DOE Technical Planning Basis

- **NFPA Risk Assessment** –
  - NFPA hazards to be evaluated: Natural Hazards, Human-caused events, and Technological-caused events; DOE focus on Human-caused events, specifically accidental and intentional release of hazardous material
  - *All* identified hazards subject to quantifiable evaluation and impact analysis; DOE requires quantitative analysis focused primarily on <u>airborne release of hazardous material</u>.
  - NFPA requires frequency estimates (probabilities), vulnerability estimates, and *RISK* assessments for each identified hazard; DOE does not.
  - NFPA requires hazards categorized by relative frequency and severity; DOE Emergency Categorization & Classification categorizes/classifies by severity only.

NFPA Risk Assessment versus DOE Technical Planning Basis

NFPA

- All hazards to be evaluated including Natural Hazards (Geological, Meteorological, Biological), Human-caused events, and Technological-caused events (computer, telecommunications, energy)
- *All* identified hazards subject to quantifiable evaluation and impact analysis
- Frequency estimates (probabilities), vulnerability estimates, and *RISK* assessments for each identified hazard
- Hazards categorized by relative frequency and severity

DOE

- Focus on Human-caused events, specifically accidental and intentional release of hazardous material
- Quantitative analysis focused primarily on <u>airborne release of hazardous material</u>
- No similar requirement
- DOE Emergency Categorization & Classification categorizes/ classifies by severity

NFPA Finance & Administration

- Some aspects covered by DOE Program Administration

- Finance emphasis under NFPA because

  - Damage estimates a consideration for declaration of a major emergency or disaster

  - Federal grant funding

Emergency Management Program
SUMMARY

- **<u>NFPA Program Administration</u>** - Generally covered by DOE Program Administration, Hazards Survey and Readiness Assurance

- **<u>NFPA Mutual Aid/Assistance</u>** – DOE Offsite Response Interfaces and Program Administration (documentation)

- **<u>NFPA Incident Management</u>** – DOE requirement to conform with NIMS and DOE Emergency Response Organization (ERO)

- **<u>NFPA Communications and Warning</u>** – Essentially covered by DOE Notifications and Communications

Emergency Management Program
SUMMARY

- **<u>NFPA Operational Procedures</u>** – Includes procedures associated with DOE Elements:
  - Program Administration (general requirements for procedures to implement the Emergency Plan)
  - Emergency Response Organization (ERO)
  - Consequence Assessment
  - Protective Actions and Reentry
  - Emergency Medical Support
  - Termination and Recovery

Emergency Management Program
SUMMARY

- **<u>NFPA Facilities</u>** – DOE Emergency Facilities and Equipment (specifically, EOC and alternate)
- **<u>NFPA Training</u>** – Generally satisfied by DOE Training and Drills
- **<u>NFPA Exercises, Evaluations, and Corrective Actions</u>** – Covered by DOE Exercises and Readiness Assurance
- **<u>NFPA Crisis Communication and Public Information</u>** – DOE Emergency Public Information

Emergency Management Program
SUMMARY

- **NFPA Laws and Authorities** – DOE Hazards Survey (Identification, but not necessarily implementation)

- **NFPA Resource Management and Logistics** – Generally covered by DOE Emergency Facilities & Equipment and Program Administration)

Emergency Management Program
SUMMARY

- Little or no explicit treatment of these NFPA Elements in DOE emergency management programs:
  - Incident Prevention
  - Mitigation

EXPECT THE UNEXPECTED

Questions

Contact Information

Dr. Jim Powers

NA-41

202-586-0633

Jim.powers@hq.doe.gov

David Freshwater

NA-41

202-586-7220

david.freshwater@hq.doe.gov

Program Element Comparison

NFPA 1600 versus DOE O 151.1C

Emergency Management Program
PROGRAM ADMINISTRATION

NFPA   DOE

- **Documented Program**
  - Plans and Procedures. . . . . Program Administration
  - Applicable authorities, ... Hazards Survey (Base
    legislation, regulations   Program)
  - Records management . . . . Program Administration
- **Program Coordinator . . . .** Program Administration
- **Advisory Committee . . . .** N/A
- **Program Evaluation . . . .** Readiness Assurance
  - Performance Objectives
  - Self-evaluation

Emergency Management Program
RISK ASSESSMENT

NFPA   DOE

- **Identifies/determines:**
  - **Range of possible hazards, ...** Hazards Survey
    threats, perils

  - **Potential impact . . . .** Hazards Assessment
    - **Severity**   **- Local, onsite, offsite**
    - **Vulnerabilities (people, property,**   **- People, entity**
      environment, entity)
  - **Categorize**
    - **Relative frequency . . . .** N/A
    - **Severity . . . .** Hazards Assessment
      Categorization & Classification
      [**Operational Emergency**
        - (Alert, SAE, GE)
        - (Not requiring Classification)]

EXPECT THE UNEXPECTED

Emergency Management Program
RISK ASSESSMENT

NFPA   DOE

- Monitor:
  - Identified hazards . . . . .Hazards Survey/Hazards
                                            Assessment
  - Likelihood of occurrence . . . . N/A
  - Vulnerability (People, ...   Hazards Assessment
    property, environment,   (People, entity)
    entity)
- Techniques for Risk . . . . .Hazards Assessment
  Assessment: (Not *risk* assessment)
  - What-If
  - Checklist
  - Hazard and operability study (HAZOP)
  - Failure mode and effects analysis (FMEA)
  - Fault-tree analysis (FTA)

Emergency Management Program
RISK ASSESSMENT

NFPA   DOE

- **Hazards To be _evaluated_:**
    - Natural Hazards . . . . Hazards Survey

        (Geological, Meteorological,   (qualitative, not quantitative)

        Biological)
    - Human-caused events
        - Accidental . . . . Hazards Assessment
        - Intentional . . . . Hazards Assessment
    - Technological-caused events . . . . . **N/A**

        (e.g., computer, telecommunications,

        energy)

Emergency Management Program
RISK ASSESSMENT

NFPA   DOE

- **Perform Impact Analysis** . . . . Hazards Assessment
  of Hazards: (Health and safety)
  – Most likely to occur? . . . . **N/A**
  – What facilities, functions, ... Hazards Assessment
    or services affected?
  – What actions will protect them? . . . . . Protective Actions and
                                                                Reentry
  – Potential impact on entity in . . . . Hazards Assessment
    quantifiable terms

Emergency Management Program
MUTUAL AID/ASSISTANCE

NFPA   DOE

- Determine need . . . . .Offsite Response Interfaces
- Establish agreements . . . Offsite Response Interfaces
- Document in

    Program Plan . . . . Program Administration

                                    Offsite Response Interfaces

EXPECT THE UNEXPECTED

Emergency Management Program
PLANNING

| **NFPA** | **DOE** |

- Planning Process
  - Plans
    - ➤ Strategic . . . . .Program Administration
    - ➤ Prevention . . . . **N/A**
    - ➤ Mitigation . . . . **N/A**
    - ➤ Emergency Operations/Response . . . Program Administration
    - ➤ Business Continuity . . . . **N/A – DOE O 150.1**
    - ➤ Recovery . . . . Termination & Recovery
  - Periodic and as-needed . . . . Program Administration
    updates
  - Include key stakeholders . . . . Offsite Response Interfaces

Emergency Management Program
PLANNING

NFPA   DOE

- Plan Elements . . . . .Program Administration
  - Clearly stated objectives
  - Roles and responsibilities
  - Lines of authorities
  - Logistics and resources
  - Process for managing
    an incident
  - Process for managing communications
    and information flow

Emergency Management Program
PLANNING

EXPECT THE UNEXPECTED

NFPA   DOE

- Plans
    - Single, integrated, combined . . . . . . Program Administration
    - <u>Strategic</u> (Vision, mission, ... Program Administration
       goals, objectives)
    - <u>Emergency Operations/Response</u> . . Program Administration
       (Assigns responsibilities)
    - <u>Recovery</u> (Priorities for restoration . .Termination and Recovery
       of functions, services, resources,
       facilities, programs, infrastructure)

EXPECT THE UNEXPECTED

Emergency Management Program
INCIDENT MANAGEMENT

NFPA

DOE

- Develop an <u>Incident</u> . . . . Emergency Response
  <u>Management System</u> (IMS)   Organization (ERO)
  - Direct, control, and coordinate
    response and recovery
  - Describe organizational roles,
    titles, and responsibilities
  - Establish policies and procedures
    for coordinating with stakeholders
  - Establish policies and procedures
    for coordinating with authorities
  - Response guided by an Incident
    Action Plan (IAP) . . . . ERO; NIMS Compliance

EXPECT THE UNEXPECTED

Emergency Management Program
COMMUNICATIONS AND WARNING

NFPA

DOE

- **Establish and maintain . . . . Notifications and Communication**
  - Communication system and test regularly
  - Procedures and exercise regularly
  - Capability to alert officials and emergency response personnel
  - Capability to alert people potentially affected by emergency
  - Address interoperability of responders

Emergency Management Program
OPERATIONAL PROCEDURES

NFPA   DOE

- Procedures include:
  - Access control . . . . Protective Actions and Reentry
  - Responder identification
    at scene . . . . Emergency Response
                                                  Organization (ERO)

    Accountability of responders
    at scene . . . . Protective Actions and Reentry
  - Accountability for personnel
    affected by the emergency . . . . Protective Actions and Reentry
  - Mobilization and demobilization
    of resources . . . . Emergency Response
                                                  Organization (ERO)

    Termination and Recovery

Emergency Management Program
OPERATIONAL PROCEDURES

<div align="center">

NFPA   **DOE**

</div>

- Procedures include (con'd):
    - Care of displaced persons . . . . .Short Term – Protective
      Actions; Long-term – N/A

    - Recovery, identification, and
      safeguarding of human remains . . Emergency Medical Support
      Mental and physical health of
      personnel affected by the
      emergency . . . . .Emergency Medical Support
    - Managing critical incident stress
      for responders . . . . Emergency Medical Support

EXPECT THE UNEXPECTED

Emergency Management Program
OPERATIONAL PROCEDURES

NFPA   DOE

- Procedures:
  - Support program and . . . . Program Administration
    execute plans
  - Response to and recovery
    from consequences of
    identified hazards –
    - ➢ Health and safety . . . . Protective Actions and Reentry
    - ➢ Incident stabilization. . . . . Termination and Recovery
    - ➢ Operational/business continuity. . **N/A – DOE O 150.1**
    - ➢ Property conservation . . . .**N/A – Other DOE Programs**
    - ➢ Protection of the environment . . . .**N/A – Other DOE Programs**

Emergency Management Program
OPERATIONAL PROCEDURES

NFPA   DOE

- Procedures: (con'd)
  - Situation Analysis
    - **Needs assessment . . . . Emergency Response Organization (ERO)**
    - **Damage assessment . . . . .Consequence Assessment**
    - **Identification of resources . . . . Emergency Response Organization (ERO)**
  - Concurrent recovery and mitigation activities during response . . . . .N/A
  - Succession of management/ government . . . . **Emergency Response Organization (ERO); DOE N 150.1; DOE O 100.1D**

Emergency Management Program
FACILITIES

NFPA

- Establish primary and alternate
  Emergency Operations
  Center (EOC), physical or virtual

DOE

. . . . .Emergency Facilities and
Equipment

Emergency Management Program
TRAINING

NFPA   DOE

- Training/educational . . . . .Training and Drills

  curriculum:
  - Support the program
  - Awareness and skill enhancement
  - Identify frequency and scope
  - Training in IMS
  - Training records
  - Training complies with applicable
    regulations

EXPECT THE UNEXPECTED

Emergency Management Program
EXERCISES, EVALUATIONS AND CORRECTIVE ACTIONS

NFPA   ### DOE

- Evaluate plans, procedures, ... Readiness Assurance
  capabilities: Exercises
  – Periodic reviews, testing,
    and exercises
  – Post-incident analyses, lessons
    learned, performance evaluations
  – Exercises to test individual elements,
    interrelated elements, entire plan(s)
  – Corrective Action Program

Emergency Management Program
CRISIS COMMUNICATION AND PUBLIC INFORMATION

NFPA

DOE

- Develop procedures to . . . . Emergency Public Information
  disseminate and respond to
  requests for information,
  before, during, and after
  an incident
- Public awareness program
  where hazard to public
- Procedure to advise public
  of threats

Emergency Management Program
CRISIS COMMUNICATION AND PUBLIC INFORMATION

NFPA   ## DOE

- Develop and maintain public . . . . Emergency Public Information

  information capability:

  – Central contact for media (JIC)

  – System for gathering, monitoring,

     and disseminating information

  – Pre-scripted information bulletins

  – Method to coordinate and clear

     information for release

  – Capability of communicating with

     special needs population

  – Protective action guidelines

Emergency Management Program
OTHER Program Elements

NFPA   DOE

- LAWS & AUTHORITIES . . . . .Hazards Survey
- INCIDENT PREVENTION . . . . .N/A
- MITIGATION . . . . N/A
- RESOURCE MANAGEMENT. . . . . . Program Administration
   AND LOGISTICS   Facilities & Equipment
- FINANCE & ADMINISTRATION . . . . Program Administration

EMERGENCY MANAGEMENT ROUNDUP

EXPECT THE UNEXPECTED