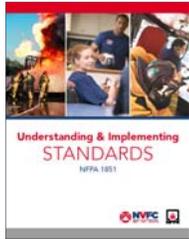


**CONTAMINATION CONTROL CAMPAIGN**

### NVFC NFPA 1851 Compliance Guide

- Specific overview of NFPA 1851 standard with commentary to suggest methods of compliance
- Offers further insight on NFPA requirements
- Has checklist as part of guide



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### What Makes a “Best Practice”

- An agreed upon action or set of procedures that is considered by the majority of persons knowledgeable in the specific topic area, which provides the preferred approach

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### Categories of Best Practices

- Contamination avoidance
- Wearing of PPE
- Gross decontamination at scene
- Contaminated item handling and transport
- Contaminated item cleaning and decontamination
- Personal hygiene
- Wellness and health
- Documentation and recordkeeping
- Apparatus design and cleaning
- Station facility design and cleaning

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### Contamination Avoidance

- Teach personnel how to recognize contamination hazards
- Delineate hazard zones at emergency scene
  - Designate HOT, WARM, and COLD zones
- Keep unprotected personnel away from contaminated areas



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### Wearing of PPE

- Select appropriate PPE
  - Conduct thorough hazard assessment
- Ensure that selected PPE is properly integrated to provide needed level of protection
- Wear PPE according to manufacturer instructions
- Continue wearing PPE where hazards still remain



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### Gross Decon at Scene

- Integrate contamination control as part of member rehabilitation procedures
- Start cleaning as soon as possible after coming out of the emergency scene
  - Perform appropriate forms of gross decontamination (cold weather?)
- Maintain protection until principal contamination is removed

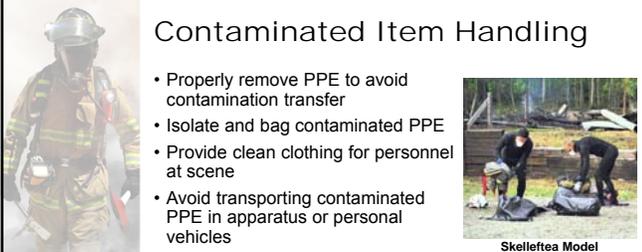


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### Contaminated Item Handling

- Properly remove PPE to avoid contamination transfer
- Isolate and bag contaminated PPE
- Provide clean clothing for personnel at scene
- Avoid transporting contaminated PPE in apparatus or personal vehicles
- Apply proper cleaning to other contaminated items



Skelleftea Model

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### Cleaning and Decontamination

- Clean all contaminated items
  - Other items: SCBA, boots, gloves, hoods, hose, tools should be addressed
- Subject contaminated items to proper cleaning
  - Pick effective processes
- Ensure that items can be safely returned to service



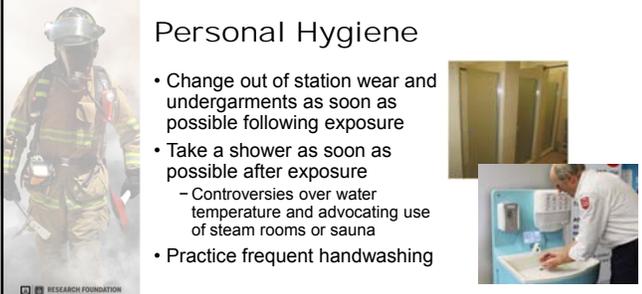
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### Personal Hygiene

- Change out of station wear and undergarments as soon as possible following exposure
- Take a shower as soon as possible after exposure
  - Controversies over water temperature and advocating use of steam rooms or sauna
- Practice frequent handwashing



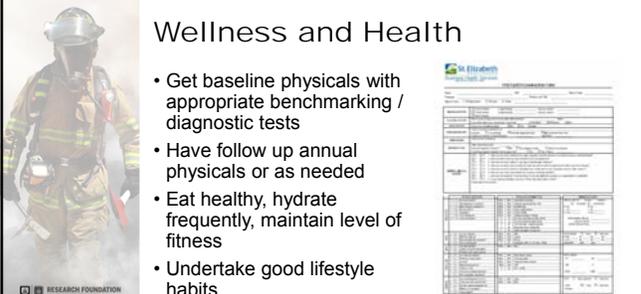
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### Wellness and Health

- Get baseline physicals with appropriate benchmarking / diagnostic tests
- Have follow up annual physicals or as needed
- Eat healthy, hydrate frequently, maintain level of fitness
- Undertake good lifestyle habits



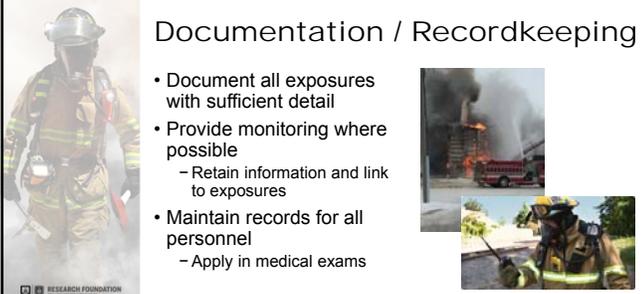
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### Documentation / Recordkeeping

- Document all exposures with sufficient detail
- Provide monitoring where possible
  - Retain information and link to exposures
- Maintain records for all personnel
  - Apply in medical exams



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### Apparatus Design & Cleaning

- Choose apparatus with storage compartments for contaminated items
  - Alternatively, use separate transport where possible
- Apply appropriate cleaning and disinfection to apparatus following use in contamination events



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### Fire Station Design / Maintenance

- Control exposures at fire station
  - Apply segregation of clean versus contaminated areas
  - Use transition zones
  - Ensure separate areas for cleaning contaminated items
  - Provide for proper storage of PPE and other frequently contaminated items
- Practice appropriate station hygiene procedures



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### Qualifying Best Practices

- “Intuitive” approach
- Application of independent data validate benefits of approach
  - Study shows benefits of practices
  - Multiple sources confirm findings
  - Work is peer-reviewed, where possible
- Consideration of resource requirements
  - Simple, practical solutions vs. use of new technology

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### Synthesizing Best Practices

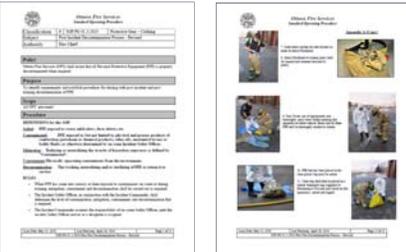
- Use imperative language versus standards language
  - “Do this” versus “You shall do this”
- Document current findings and science behind recommended procedures
  - Provide links to related data or studies that demonstrate value
- Provide detailed procedures that can be adapted by different organizations (e.g. standard operating procedures)
- Consider cost of implementation
  - Offer inexpensive, low resource alternatives where possible

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### Sample SOPs and SOGs



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### Referencing Best Practices

- Recommendation 1
  - Develop comprehensive best practices document covering span of contamination control
  - Apply NFPA committee process for development of best practices, but populate with heavy end user representation
  - Separately reference other standards and information sources where appropriate
- Recommendation 2
  - Highlight different best practices and related information from existing organizations

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### Best Practices Questions

- **BP1** – Should a purpose of the campaign be to consolidate a comprehensive list of best practices or simply reference existing guidelines?
- **BP2** – Which features make best practices useful to you/your organization?
- **NEW QUESTION** – What gaps do you see in the current set of listed best practices

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### Addressing Products / Services

- Various products or services have emerged to address specific “contamination control” issues
  - Multiple claims about efficacy
  - Claims should be validated or based on standardized testing
- No oversight for many products and services
  - Difficult to police industry
  - Use DHS for possible SAVER program?




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### SAVER Program

- System Assessment and Validation for Emergency Responders (SAVER)
- Provides basis for independent evaluation of specific products
- Consumer Products Guide-like approach

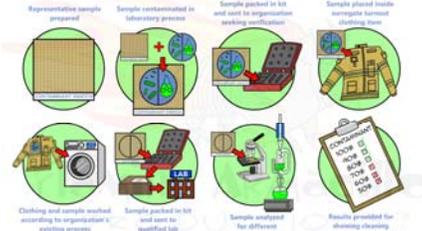



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### Cleaning Process Validation



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### Sanitizer Experimental Results

- Preliminary data indicate that outer shell materials are not being fully sanitized
- Results are worse than small scale “sterile” results
- Possible effects of competing non-test bacteria




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**CONTAMINATION CONTROL CAMPAIGN**

### Best Practices Questions

- **BP3** – What tools did you see today that will support you in your efforts to address fireground contamination issues?
- **BP4** – What additional tools do you need to support you in your efforts to address fireground contamination issues?



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### Best Practices Questions

- **BG5** – Should the best practices database include sample standard operating procedures (SOP) from existing fire departments or other organizations?
- **BG6** – Should the best practices database include reviews of new technologies or equipment related to contamination control?
- **BG7** – What criteria should be applied for determining appropriate best practices to be cited?



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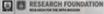
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### Best Practices Questions

- **BG8** – If conflicts exist between practices, what process should be used to make the appropriate choice? Should a choice be made?
- **BG9** – Do you think NFPA or some other organization should view decisions on contamination control through a committee process that is similar to the standards development process?

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