




CONTAMINATION CONTROL CAMPAIGN



## CONTAMINATION CONTROL CAMPAIGN

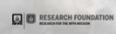
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RESEARCH FOR THE FIRE SERVICE

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## Welcome and Call to Order

Presenters: Casey C. Grant, Research Foundation  
Ned Pettus, Columbus Safety Director


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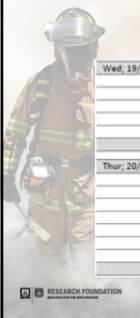
## Introduction / Opening Remarks

**Casey Grant, Executive Director**  
Fire Protection Research Foundation  
• Meeting logistics

**Ned Pettus, Columbus Safety Director**  
Former Chief, Columbus Fire Department  
Former Member, NFPA Board of Directors  
• Welcome

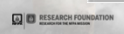

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## Workshop Agenda

Wed, 19/July	1:00 pm	Day One: Welcome and Call to Order	Casey Grant, FPRF
	1:15 pm	Overview of fire service contamination issues and feedback	Jeff Stull, IPP
	2:15 pm	Case Study: Equipment & Facilities	Paul Erickson, LEWA
	2:45 pm	PA Break	
	3:00 pm	Interactive/searchable research/literature database and feedback	Jeff Stull, IPP
Thur, 20/July	4:00 pm	Standards resource database and feedback	Jeff Stull, IPP
	5:00 pm	Adjourn for Day One (& Evening Networking Reception)	
	8:00 am	Day Two: Review of Day One activities – any additional feedback?	Casey Grant, FPRF
	8:15 am	Case Study: Standards Revisions	Dave Bernzweig, CFD
	8:45 am	Best practices database and feedback	Jeff Stull, IPP
	9:45 am	Case Study: Best Practice Information	Beth Gallup, KFD
	10:15 am	Adj Break	
	10:30 am	Contamination Control practices in related industries and feedback	Jeff Stull, IPP
	11:15 am	Outreach Plan Review	Peg Paul, PPA
	11:45 am	Workshop Wrap-up & Summary Observations	Casey Grant, FPRF
	12:15 pm	Adjournment	


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## Project Overview

- DHS AFG R&D Grant
- 1 year project
- Project Partners
  - Fire Industry Education Resource Organization (F.I.E.R.O.)
  - International Personnel Protection, Inc.
  - Peg Paul & Associates

<http://www.nfpa.org/news-and-research/resources/fire-protection-research-foundation/current-projects/campaign-for-fire-service-contamination-control>




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## Project Coordination

- Oversight, creation of panel
- Workshop logistics and compilation of feedback
- Development of campaign elements and key content
- Creation of theme and promotional materials




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### Project Approach

- Workshop planning / Information development
- Workshop execution / Participant feedback
- Finalize elements / Implement campaign

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### Project Objective

- To develop and facilitate the outreach of an educational campaign to control the spread of harmful fire ground contaminants, ultimately in support of improved fire fighter long-term health.

*This will be accomplished by identifying and addressing stakeholder gaps for the control of contaminants adversely impacting fire fighter health through a process of generating, clarifying and prioritizing specific recommended best practices.*

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### Participant Questionnaires

- Intended to capture key feedback during workshop
  - Some questions integrated into presentations
  - Selected questions will be used to facilitate group discussion
- Questions have codes and numbers related to presentation topic and overall order

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### Overview of Fire Service Contamination Issues

Presenter: Jeffrey O. Stull,  
International Personnel Protection, Inc.

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### Original Project Scope

- Review published literature
- Establish information hierarchy
- Identify gaps in standards
- Examine practices in related industries
- Review past and current research
- Generate proposed intervention strategies

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### Adopted Project Philosophy

- Position information to evolve and be updated
- Permit utility by a wide range of individuals within and outside the fire service
- Establish accessibility through a range of forums
- Provide information in an actionable form and create opportunities for increased awareness and adoption of standard practices

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### New Project Outputs

1. Overview of fire service contamination issues
2. Interactive, searchable research and literature database
3. Standards resource database
4. Synthesized suggested fire service best practices
5. Descriptions of contamination control practices in parallel, related industries
6. Question / answer forum
7. Glossary of terms

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### Proposed Dissemination

- Proposed platform – Website
- Other outreach
  - Q&A Forum
  - Glossary
  - Social media
- Establish to allow updates and evolve to meet fire service needs

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### Understanding Contamination

- Exposure likelihood
  - Method of exposure
- Persistency
  - Chemical: volatility
  - Biological: viability
- Relative hazard
  - Acute
  - Chronic
- Ease of detection

**Types**

**Missions**

**Locations**

**Equipment**

**Mitigation**

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### Scope: Contamination Types

**Products of Combustion**

**Chemicals**

**Blood and potentially infectious body fluids**

**Asbestos**

**Infectious bacteria, viruses, and spores**

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### Scope: Fire Service Missions

**Structural Fires**

**EMS**

**Technical Rescue**

**HazMat Response**

**Wildland Fires**

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### Scope: Exposure Locations

**On Fireground**





**Inside Apparatus**

**At Fire Station**

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### Scope: Equipment





Turnout Gear      Fire Hose      Tools

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### Scope: Mitigation Methods

On Scene Gross Decontamination      Laundering of Turnout Gear      Source Capture of Apparatus Diesel Exhaust



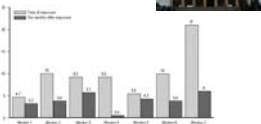
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### Case Study: PCB Transformer Fire

- Transformers caught fire in basement of state office building
- Dioxins in smoke produced by burning of PCB-containing oil spread throughout building
- Firefighters responded in normal turnout gear; bodies covered with contaminated soot




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### Case Study: PPE Storage

- New firefighter gear stored at water treatment facility
- Exposed to low levels of chlorine and other chemicals
- Firefighter claims skin and neurological issues


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### Case Study: Gas Station Fire

- Protracted gas station fire and explosion; heavy smoke
- Veteran firefighter of moderate size department
- Some ensemble items not cleaned after event
- Suffers early onset Alzheimer's and encephalopathy




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### Case Study: MRSA Outbreak


- Over dozen probational firefighters at large metropolitan fire department diagnosed with MRSA
- Fire department believed outbreak due to poor cleaning of turnout gear
- Associated with knee wounds cause by training
- New washing and modified training procedures instituted



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**Other Unique or Illustrative Cases?**

**Your Experiences?**

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**Proposed White Paper**

- **Purpose:** raise awareness of fire service on contamination issues
- **Overall length:** 6 to 8 pages
- **Key points:**
  - Broad contamination hazards exist throughout the fire service (more than just cancer concern)
  - Gaps in addressing contamination: not all missions, locations, and equipment are being addressed
  - Comprehensive approaches are needed to limit exposure to contamination and limit transfer

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**White Paper Elements**

- The contamination problem in the fire service
- Examples of contamination and how firefighters are being exposed
- Development of contamination control program and application of best practices
  - Recognition of contamination sources
  - Protective measures
  - Isolation of contaminated items
  - Post exposure cleaning and decontamination
  - Maintenance of hygiene for firefighters, apparatus, stations

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**White Paper Elements (continued)**

- State of research in contamination control
- Current gaps in controlling contamination
- Available resources
- References

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**White Paper Use & Accessibility**

- Utility for organizations
  - Awareness for fire service
  - Justification of instituting change in specific departments
  - Identification of industry needs
- Available forms
  - Print / Downloadable PDF
  - PowerPoint Presentation
  - Video
  - Other?

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**White Paper Questions**

- **WP1** – Does proposed white paper contain appropriate level of detail?
- **WP2** – Do you feel that firefighters face broader issues than increased rates of cancer?
- **WP3** – Was the information presented for the white paper useful to you?
- **WP4** – Will you be able to use information [in white paper] to affect change in your organization?

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White Paper Questions *(continued)*

- **WP5** – What categories/resources/information could be included in the white paper to help you take action/affect change?
- **WP6** – Who do you think are the principal audiences for the white paper?
- **WP7** – How do you expect to access the white paper?

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