

## **National Personal Protective Technology Laboratory**

# **Introduction Standards Development Efforts for CBRN CC-SCBA**

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## **CBRN CC-SCBA Standard**

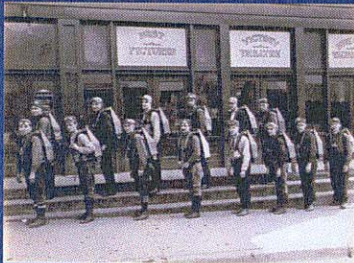
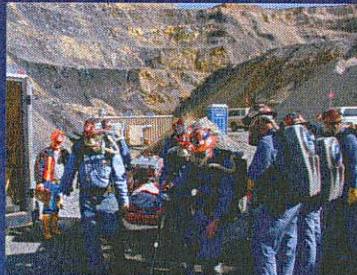
- **Goal**
  - Develop a NIOSH/NPPTL full-facepiece, closed circuit, self-contained breathing apparatus (CC-SCBA) standard that addresses CBRN materials identified as inhalation hazards or possible terrorist hazards for emergency responders.
- **Use**
  - For long-duration missions, involving entry into an atmosphere where contaminant concentrations are IDLH, and which may not contain adequate O<sub>2</sub> Levels.

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## CC-SCBA



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## Effective CBRN Standards Development

### Public Process

- Transparent
- Identify Key Stakeholders
- Form Partnerships



### Best Practice

- Good Science
- Benchmarking
- Research
- Peer Review

### Focus on Performance

- Hazards Analysis
- Human Capabilities
- Quality Assurance
- Reliability
- Practical Use

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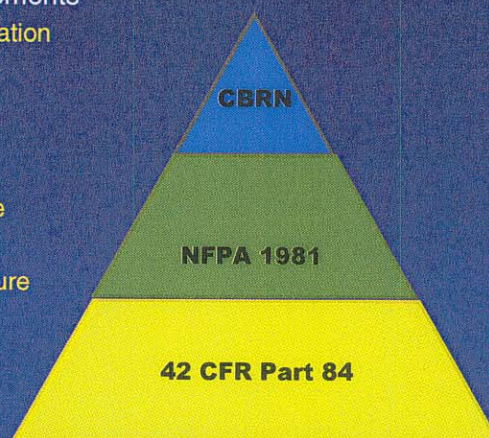
## Model for CBRN Standards Development

- Three tiers
- NIOSH approval under this program will signify that a respirator is expected to provide needed protection to first responders in situations where an act of terror has released harmful chemicals, pathogens, or radioactive materials into the air.
- Approvals will be based on positive results from rigorous tests on sample units submitted to NIOSH by manufacturers, and from stringent evaluation of manufacturers' quality-control practices, technical specifications, and other documentation



## CBRN CC-SCBA Concept Standard

- Tier 3: Special CBRN Requirements
  - CWA penetration and permeation resistance
  - Practical performance
- Tier 2: NFPA 1981
  - High Work Rate Performance
  - Operational Performance
    - Environmental Temperature
    - Heat and Flame
- Tier 1: 42 CFR, Part 84
  - Applicable sections



## CBRN CC-SCBA Requirements

- **Concept calls for adapting the:**  
NFPA 1981 Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services  
to CBRN CC-SCBA
- **Use of an Automated Breathing and Metabolic Simulator (ABMS) for performance testing**



## Quality Partnerships Enhance Worker Safety & Health

**Thank you !**

