National Personal Protective Technology Laboratory

CBRN PAPR Summary
Sheraton Station Square, Pittsburgh, PA

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CBRN PAPR Standard Development

Goal:

- Develop a NIOSH/NPPTL tight fitting, powered air purifying respirator standard for emergency responders that address CBRN materials identified as inhalation hazards and/or possible hazards from terrorist activity.
CBRN PAPR Standard Development

- Performance based CBRN PAPR concept

Flow
- Testing via use of high flow breathing machines
- Constant flow and pressure demand

Filter capacity
- Tested at flow rate determined by PAPR blower

Particulate efficiency
- 99.97% tested at flow rate or velocity determined by PAPR Blower

Hazard protection
- Requirements same as CBRN APR
CBRN PAPR Standard Development

Future Considerations for Respirator Certification

- Application content
- Unique labeling requirements
- Component labeling
- Quality control plan
- Canister uniformity
- Manifold airflow uniformity
CBRN PAPR Standard Development

Actions for CBRN PAPR Concept Development

- Revise and post CBRN PAPR concept
- Continue stakeholder discussions on concept development
- Breathing performance testing
  - Breathing machine at ambient conditions
- 99.97% efficiency particulate testing
- High flow
CBRN PAPR Standard Development

Actions for CBRN PAPR Concept Development

- Development/benchmark testing
- Gas & vapor capacity testing at high flow
- LRPL with neck dam PAPRs
- CO₂
- Battery performance at low temperatures
- Verification testing of STPs

Target date for standard: September 2005
Information Docket

CBRN PAPR Respirator

- NIOSH Docket Office
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  - PAPR - NIOSH 010
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  - Cincinnati, OH 45226

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