

**National Personal Protective
Technology Laboratory**

CBRN PAPR Summary

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December 15, 2004

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/benchmark testing**
 - **Breathing performance testing**
 - **Breathing machine @ 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

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