

National Personal Protective Technology Laboratory

Powered Air-Purifying Respirator Overview

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**December 2, 2008
Docket 008A**



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PAPR Agenda

9:00 – 9:45

PAPR Presentations

- Overview

9:45 – 10:15

PAPR Posters

10:15 – 11:30

PAPR Presentations

- Flow Rates

- Gas/ Vapor and Aerosol Testing

- End of Service Life Indicator Research

11:30 – 12:00

PAPR Public Comment Period



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Presentation Topics

- Requirement Development
- Flow Rates
- Gas Life / Aerosol Testing
- End of Service Life Indicator Research
- Input Being Sought



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Requirement Development

- Identify Minimum Performance Standards
- Allow for Existing Technologies to Continue
- Allow for New Technologies to be Certified



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Requirement Development

- Use of December 21, 2007 Concept Paper (three sets of comments)
- Stakeholder Feedback (Docket, Public Meetings, Stakeholder Meetings)
- Response to “Document for Comment” (put in web link)



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Work Rates Expressed as Respiration Flow Rates

- Leverages ISO work
- Responds to stakeholder comments
- Meets Needs and Protections for Variety of Users
- Expands Product Market



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Flow Rates

Development of New Categories

Breath Assisted

- 11 Lpm, 25 Lpm, 40 Lpm
- Inward leakage of 0.004 (LRPL Value of 250)

Positive Pressure

- 40 Lpm, 57 Lpm, 78 Lpm, 99 Lpm
- Inward Leakage of 0.0001 (LRPL Value of 10,000)



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Gas Life and Aerosol Testing

- Alternate approach for gas and vapor testing that uses the Wheeler relationship
- Wheeler relationship addresses assessment of capacity and efficiency at multiple flow rates
- Benchmark Testing shows feasibility of maintaining aerosol challenges at high flow rates



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ESLI

- **Advance Respiratory Protection Technology**
- **Use only on Positive Pressure Devices that may be more technologically advanced**
- **Focus on Organic Vapor and Acid Gas Protections where research has indicated ESLI feasibility**



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PAPR Standard Implementation

- **Product Approvals under new rule:**
 - Takes effect 30 days after publication in the FR for all new respirator applications
 - Certification of new product on First in, First out basis
- **Product Approvals under previous requirements**
 - Manufacturers/Distributors may sell PAPRs approved under the current regulations for up to 3 years after promulgation of the new requirements
 - Consider modifications / extension of approval for 2 years after publication of new rule in the FR
- PAPRs with current approvals will not be obsolete



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Input Being Sought

- Opinions on the concept of categorizing PAPRs as breath assisted or positive pressure devices.
- Opinions on the expansion of the number of work rates where PAPRs can be submitted for approval.
- Opinions on the linkage of breath assisted PAPRs and positive pressure PAPRs with LRPPL testing.
- Opinions on the consideration of an alternate approach to gas and vapor testing.
- Opinions on the establishment of positive pressure PAPR ESLI for organic vapors and acid gases.



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Powered Air-Purifying Respirators

Stakeholder Input can be submitted by

– Mail:

NIOSH Docket Office

Robert A. Taft Laboratories, M/S C 34

Reference: Docket 008 A – Powered Air-Purifying Respirators

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