

National Personal Protective Technology Laboratory

Powered Air-Purifying Respirator Overview

Jonathan Szalajda
Policy and Standards Development Branch

December 2, 2008

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**

Presentation Topics

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

Requirement Development

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

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”**

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**

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)

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**

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**

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

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 LRPL 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.**

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

4676 Columbia Parkway

Cincinnati, OH 45226

– Email: niocindocket@cdc.gov

– Fax: (513) 533-8285

– Phone: (513) 533-8611

NIOSH NPPTL/PPT Program



Visit Us at: <http://www.cdc.gov/niosh/npptl/default.html>

Disclaimer: The findings and conclusions in this presentation have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.