

**National Personal Protective  
Technology Laboratory**

**CBRN Respirator Standard  
Development**

**Holiday Inn Select, Pittsburgh South  
Pittsburgh, Pa  
Jonathan Szalajda**

**July 20, 2005**

# CBRN Respirator Standards

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.

# Agenda – July 20, 2005

8:30 a.m.	Welcome	Les Boord
8:35 a.m.	CBRN Overview/PAPR Strategy	Jon Szalajda
9:15 a.m.	CBRN PAPR Benchmark Testing	Terry Thornton Rich Vojtko, EG&G Jeff Palcic, EG&G Paul Gardner, ECBC
10:15 a.m.	Break	
10:30 a.m.	CBRN PAPR Benchmark Testing (Continued)	
11:15 a.m.	Hazard Assessment for Non Tight Fitting CBRN PAPR	Frank Palya
11:30 a.m.	Lunch	

## **Agenda – July 20, 2004**

<b>12:30 p.m.</b>	<b>Customer Satisfaction</b>	<b>Maryann D’Alessandro</b>
<b>12:45 p.m.</b>	<b>Shrouds for Non-Tight-Fitting PAPRs Used by First Receivers</b>	<b>Ray Roberge</b>
<b>1:10 p.m.</b>	<b>Detecting PAPR Facial Leakage</b>	<b>Art Johnson, University of Maryland</b>
<b>1:30 p.m.</b>	<b>Pittsburgh Matrix Project</b>	<b>Mike Allswede, UPMC</b>
<b>1:50 p.m.</b>	<b>Break</b>	
<b>2:00 p.m.</b>	<b>Industrial PAPR</b>	<b>Bill Hoffman/Jon Szalajda</b>
<b>2:30 p.m.</b>	<b>Guest Presentation</b>	<b>Craig Colton, 3M</b>
<b>2:45 p.m.</b>	<b>Open Comment Period and Closing Comments</b>	

## Meeting Logistics

- Sign in sheets
- Meeting recorded and transcribed verbatim for docket
- Presentation in accordance with the agenda
- Q & A period after each presentation
  - Comment at microphone; identify name and affiliation
  - Additional presentations – sign up at registration desk

# Information Docket CBRN PAPR

- **Mail:**
  - NIOSH Docket Office
  - Robert A. Taft Laboratories, M/S C 34  
PAPR – NIOSH 010  
4676 Columbia Parkway  
Cincinnati, OH 45226
- **Email:** [niocindocket@cdc.gov](mailto:niocindocket@cdc.gov)
- **Fax:** (513) 533-8285
- **Phone:** (513) 533-8303
- **NPPTL Web Site:** <http://www.cdc.gov/niosh/npptl>

# CBRN Standards Partnerships

- **Workshops/Committee Meetings**
  - NIOSH-DOD-OSHA Chemical-Biological Respiratory Workshop & Report (March 1999)
  - Interagency Board standards & PPE committees
- **Cooperation among NIST, RDECOM, OSHA, NIOSH, NFPA, and DHS**
- **Define collaboration for CBRN standards development**
- **IAA's with NIST and RDECOM**
- **Initial and continuing funding from NIST-NIJ/NIST-DHS/ and CDC**
- **RDECOM technical support for testing**

## **CBRN Respirator Standards Impact**

- NIOSH CBRN Respirator Standards have been recognized and adopted by:
  - The DOD/DHS InterAgency Board
  - DHS, as the first CBRN standards used for issuing grants to responder organizations
  - NFPA in their protective ensemble standards
- British Standards Institute (BSI) is considering adopting our standards in the UK since there are no CBRN respiratory protection standards in ISO



# CBRN Respirator Standards

- **Standards Completed**

- SCBA – January 2002
- SCBA upgrades – March 2003
- Gas masks – March 2003
- Escape sets – October 2003

- **Standards in Development**

- PAPRs
- Closed-circuit SCBA
- Integrated SCBA/PAPR
- Integrated SCBA/APR



# CBRN Respirator Standards

- **Continue Standards Development Efforts for Remaining Classes of Respirators**
  - Public Process
- **Provide clarifications to Existing CBRN Standards (SCBA, APR, APER, SCER) based upon lessons learned over the past four years**
  - Clarifications, Not Revisions to Requirements
  - Post Clarifications to Web Site by Oct 30, 2005
  - 30 day Public Review and Comment Period
  - Post Updates by Dec 30, 2005

# **CBRN PAPR Standard Development Docket and Meeting Comments**

- **Public meetings**
  - October 2003
  - May 2004
  - December 2004
  - July 2005
  - September 29, 2005 (planned)
- **Docket**
  - 21 submissions

# **CBRN PAPR Respirator Concept Docket and Meeting Comments**

## **Summary by Topic (303 specific comments)**

- Abrasion resistance (6)
- Airflow (34)
- Battery requirements (21)
- Blower requirements (5)
- Breathing resistance (8)
- Interchangeability (14)
- Communication (7)
- Canister Testing (31)
- Carbon dioxide (13)
- Container requirement (1)
- Crisis mode (8)
- Decontamination and maintenance (1)
- Durability/conditioning (16)
- Filter Requirements (3)

# CBRN PAPR Respirator Concept Docket and Meeting Comments

## Summary by Topic (continued)

- Fogging (2)
- Harness design (4)
- Intrinsic safety (1)
- Labels (7)
- Indicators (10)
- LRPL (22)
- CWA (9)
- MPC (1)
- Noise levels (2)
- Operational controls(2)
- Particulate testing (11)
- Practical Perf. (11)
- Training (2)
- Admin (50)

# CBRN PAPR Respirator Concept Docket and Meeting Comments

- Comments provided through various sources
  - Formal Docket submissions
  - Public Meeting Feedback
  - Informal Stakeholder Meetings
- Comments are accepted in total or in part as part of standards development process
- Comments are rejected for technical / programmatic reasons
- Comments remain under consideration, pending completion of benchmark testing

# CBRN PAPR Respirator Concept Docket and Meeting Comments

- Comments related to airflow (breathing resistance), crisis provision, particulate testing, and implementation still under consideration
- Comments related to general construction or special CBRN requirements accepted either in whole or in part.

## **CBRN PAPR Implementation**

- **Because of the comprehensive nature of the CBRN PAPR requirements, NPPTL has received internal and external recommendations that the CBRN PAPR be implemented using formal rulemaking processes**
- **Concern is that because there is not an existing, updated PAPR standard, the CBRN PAPR standard will become template for industrial PAPR performance**



# CBRN PAPR Implementation

- Previous CBRN Respirator Standards have been implemented using a voluntary approval program pursuant to 42 CFR Parts 84.60(b) and 84.63(c).
- These sections provide NIOSH with the authority to issue approvals for respirators not specifically addressed in Part 84 and to develop additional requirements that the agency determines are "necessary to establish the quality, effectiveness and safety of any respirator used as protection against hazardous atmospheres."
- Projected Implementation via policy: Fall 2005

# CBRN PAPR Implementation

## Formal Rulemaking Process –

- Follow administrative procedures and staffing requirements
- 18 to 21 months to implementation (Fall 2007)

# CBRN PAPR Implementation

- Project focus is to provide the user community with required protection as quickly as possible
  - Project will verify all standard test procedures prior to implementation of the standard
  - NPPTL will continue working the implementation issue with internal and external partners
  - Implementation approach to be discussed at September 29, 2005 public meeting
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- **New Concept Paper by August 31, 2005**