



NBC Respirator Requirement Development Activities NIST, NIOSH, and SBCCCOM

Background & Program Overview





NIST - Office of Law Enforcement Standards Role

**Technical Arm of National Institutes of Justice's
Office of Science and Technology**

Weapons and Protective Systems

- Performance Standards
- Test Methods and Procedures
- Technical Reports
- User Guides

NIOSH Role in a Terrorism Disaster: Federal Response Plan

Federal Response Plan for a major disaster or emergency (1999) –Health and Medical (ESF 8) includes worker health and safety:

“Lead HHS Agency: Centers for Disease Control and Prevention: Assist in monitoring health and well-being of emergency workers; perform field investigations and studies addressing worker health and safety issues; and provide technical assistance and consultation on worker health and safety measures and precautions.”

Department of Defense – SBCCOM Role

- **SBCCOM Supports**
 - Chemical weapons storage and demilitarization
 - Associated environmental remediation
 - Chemical weapons treaty compliance
- **ACCESSES OTHER DOD ASSETS**
 - Dugway Proving Ground
 - USA Center for Health Promotion and Preventive Medicine
 - Navy and USAF CB Defense Expertise



Department of Defense – SBCCOM Role

- 80+ years experience in developmental testing of CB materiel
 - Including protective masks and suites
 - Participated in development of military standards
 - Developed test protocols for military and civilian equipment testing
- DP program testing non-military protective gear against chemical agents
- Have appropriate labs and specialized personnel
- SBCCOM member of IAB
- Extensive experience with real CB agents
- PM for NBC Defense Systems part of SBCCOM
 - Developer for Joint Mask Programs



Needs for worker protection

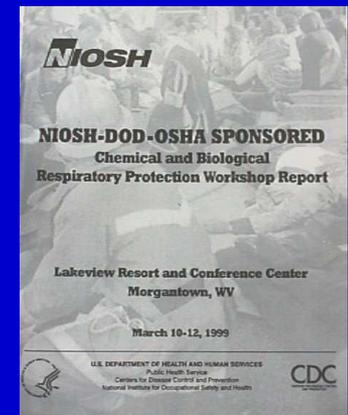


Chemical and Biological Respiratory Protection Workshop

Sponsors: NIOSH, DOD, OSHA

- 140 subject-matter experts, 63 organizations
- Chemical/biological incident hazards
- Explored responder respiratory protection needs
- Domestic preparedness respirator selection criteria
- Public health and medical concerns
- NIOSH leadership with new NBC standards
- Workshop Report (Pub. 2000-122)

Request from 1-800-35-NIOSH



Respiratory Protection Workshop Concerns

- Required to use NIOSH certified APR & PAPR, & SCBA
- Need for certified personal protective equipment (PPE)
- Assurance SCBA will survive CWA exposure
- Appropriate cartridge/canister performance tests
- Relevant protection factor (PF) protocols
- Valid assigned protection factor (APF) methods
- Training assistance with PPE/respirator selection
- Use applicable DOD respirator standards

The InterAgency Board

for Equipment Standardization and Interoperability



- 41 responder, local, state, and federal organizations
- Departments of Justice and Defense joint lead
- Standardized Equipment List for WMD response
- NIOSH & NFPA co-chair the Standards Subgroup, NIST, SBCCOM, OSHA, DOE, IAFF, IAFC members
- SBCCOM co-chairs the Personal Protective/Operational Equipment Subgroup, NIOSH & NIST are members
- All members contribute on technical issues & standards priorities

IAB #1 PPE Priority: NIOSH NBC Respirator Approvals



NBC Respiratory Protection Issues

- OSHA requires employers to provide NIOSH certified respirators
- Need to develop capacity to evaluate, test and approve respirators against chemical, biological, radiological, and nuclear warfare agents
- Response organizations are already purchasing respirators for use against terrorist weapons

Occupational Safety and Health Standards and Regulations

Regulations: - OSHA 29 CFR 1910 and 1926

- EPA 40 CFR 156, 170 and 311
- MSHA 30 CFR 56, 57, 70, 75 and 77
- NRC 10 CFR 20, DOI 30 CFR 250
- DOT 49 CFR 192, 193, 194, and 195
- NIOSH 42 CFR 84 respirators

Consensus Standards: - ANSI Z88 respirators

- NFPA 1981 & 1404 SCBA & respirator program
- AIHA respirator user guides

Interagency Objectives for NBC Respirator Certification

- Hazards & vulnerability assessment
- NBC respirator standards development
- Test method development & validation
- Conduct applied laboratory research to fill gaps
- Qualify collaborating laboratories
- Special NBC approval application procedure
- Standards implementation process
- NBC respirator approvals and records systems

Present Standards Assessment

- NIOSH standards based on general industry and mining
- No NIOSH approvals for CWA or BWA
- Military standards based on open battlefield BWA & CWA
- Military masks are not evaluated against TICs
- Need new or revised NBC respirator requirements

Counterterrorism Accomplishments

Extramural

Respirators

- IAB Standards Board Chairmanships & Memberships
- TOPOFF 2000 national terrorism exercise
- CT respiratory protection sessions at ISRP Conferences 1999 & 2000
- NIST Detection and PPE Equipment Compendiums
- SBCCOM testing of commercial respirators and escape hoods

General

- Numerous presentations to stakeholder groups
- Domestic Preparedness training and commercial product tests
- CDC Bioterrorism Steering Committee participation
- NFPA 1994 Personal Protective Clothing Standards



What Others Are Saying

“To help to reassure responders that the equipment that is being used is **in fact capable of doing what it is designed to do**, it is likely that an ambitious program of independent testing and evaluation will have to be undertaken... any such program will likely have to be conducted—because of its national implications—under Federal sponsorship...”

Source: ‘Gilmore Commission’ 1st report, Dec 1999

“One success story... a consortium to develop consensus-based standards and codes for the clothing and equipment that firefighters, police, and EMS rescuers would use [**describes NIOSH MOU with OSHA, NIST, & NFPA**]”

Source: Stimson Center, Ataxia, Oct 2000