Conformity Assessment Approaches and Best Practices NIST Public Workshop

Session 4:

Conformity Assessment Case Study Personal Protective Technologies

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bpj5@cdc.gov

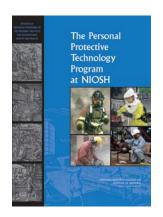
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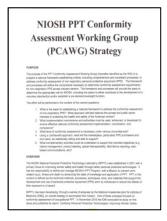


Presentation Overview

- NIOSH's PPT Program and Its Background in Conformity Assessment
- IOM CA Report Recommendations
- NIOSH Strategy to Address Recommendations
- Status of Implementing the Strategy













NIOSH PPT Program Mission

An estimated 20 million workers use personal protective equipment on a regular basis to protect themselves from job hazards.









The MISSION of the PPT program is to prevent workrelated injury, illness and death by advancing the state of knowledge and application of personal protective technologies (PPT).





NIOSH Respirator Conformity Assessment Activities





- Engineering Evaluation
- Respirator Testing
- QA Plan Evaluation



- Manufacturing Site Audits
- Respirator Product Audits
- Respirator Evaluations



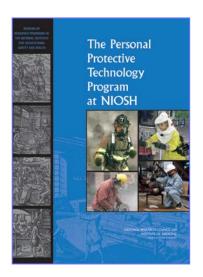


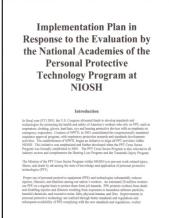




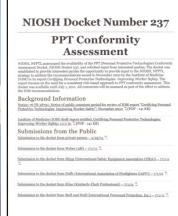


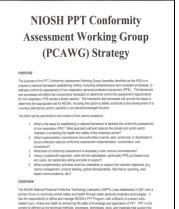
NIOSH Conformity Assessment Foundational Background











June 2008

NA
PPT Program
Evaluation Report:
Five
Recommendations

May 2010

PPT Program's
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Implement
Recommendations

February 2011

IOM's Analysis of NA Report Recommendation 1: Comprehensive CA Program May 2011

NIOSH Docket # 237 Public Comment on IOM CA Report October 2011

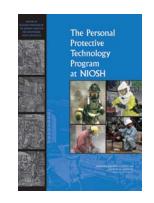
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PPT Conformity
Assessment
Working Group
Established





NA Report Observations

"NIOSH certification of respirators has had a significant positive impact on the quality of respirators available in the workplace."



"There is no analogous federal process for ensuring the certification of the efficacy of nonrespiratory PPT."

NA Report Recommendation 1

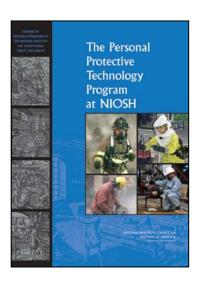
 Oversee <u>all PPT</u> certification in order to ensure a minimum uniform standard of protection and wearability. The National Program should <u>collaborate</u> with other relevant government agencies, private-sector organizations, and not-for-profit organizations to conduct an assessment of the certification mechanisms needed to ensure the efficacy of <u>all types of</u> <u>PPT</u> (emphasis added); and

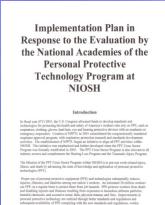




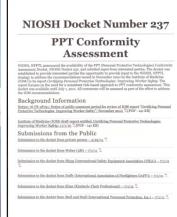


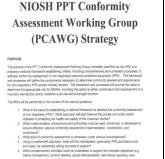
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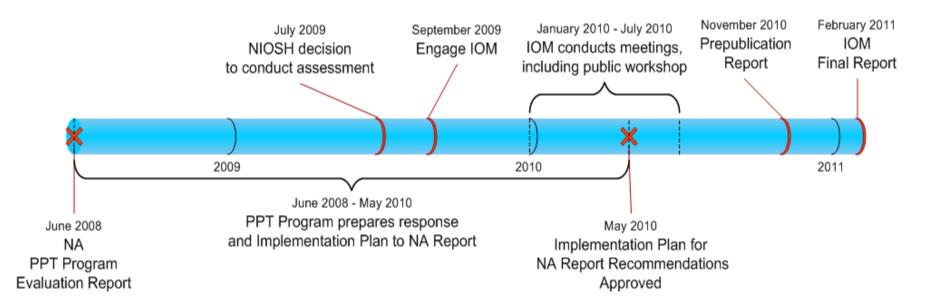
Engaging the IOM to Assess Nonrespiratory PPT Certification

Implementation Plan in Response to the Evaluation by the National Academies of the Personal Protective Technology Program at NIOSH

Introduc

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Charge to the IOM Committee

- Assess the [conformity assessment]
 mechanisms needed to ensure the efficacy of
 nonrespiratory personal protective technologies
 (PPT)
- Examine various approaches to *various* [conformity assessment elements] (e.g., federal laboratory certification, third-party certification, federal certification of nongovernmental laboratories)
- Provide recommendations on [conformity assessment for] non-respiratory PPT

Implementation Plan in Response to the Evaluation by the National Academies of the Personal Protective Technology Program at NIOSH

Introduct

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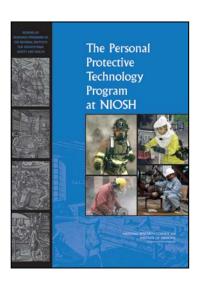
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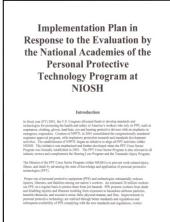


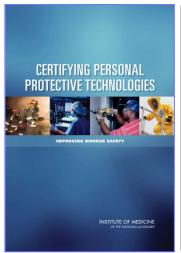


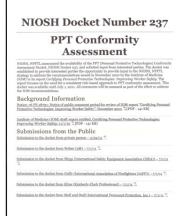


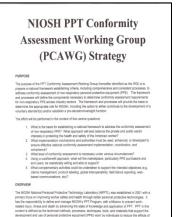
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IOM Report Recommendations



 Recommendation 1 - Develop and Implement Risk-Based [Conformity Assessment Processes] for Nonrespiratory PPT

- Recommendation 2 Enhance Research,
 Standards Development, and Communication
- Recommendation 3 Establish a PPT and Occupational Safety and Health Surveillance System





IOM Report Conformity Assessment Tiered Approach



Low risk

Manufacturer attestation to the standard

Medium risk

Third-party testing and certification by accredited entities

High risk

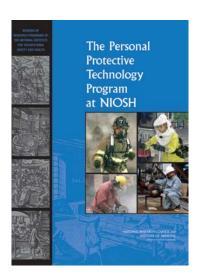
- Third-party testing and certification by accredited entities
- Government involvement to provide oversight and to assist in enforcement

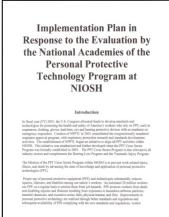


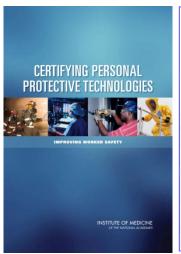


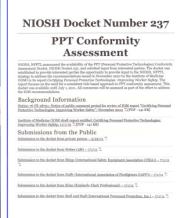


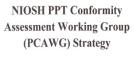
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 5. What complementary activities could be undertaken to support the intended objectives claims management conduct labeling school intercognishing field felling reporting using

sesed communications, etc)?

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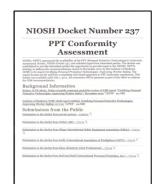
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NIOSH Conformity Assessment Foundational Background



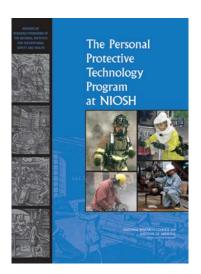
Responses to NIOSH Docket # 237

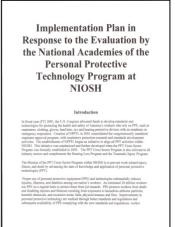
- 3M Corporation
- International Safety Equipment Association (ISEA)
- International Association of Firefighters (IAFF)
- Kimberly-Clark Corporation
- International Personal Protection, Inc. (Stull & Stull)
- Oil and Gas Industry Representative (Reznicek)

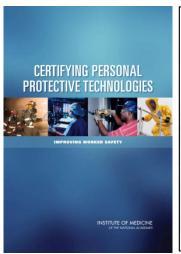


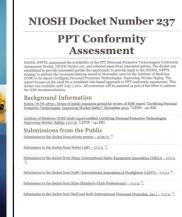


NIOSH Conformity Assessment Foundational Background









NIOSH PPT Conformity Assessment Working Group (PCAWG) Strategy

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 5. What complementary activities could be undertaken to support the intended objectives (e.g., and the intended objectives (e.g., and
- claims management, product labeling, global interoperability, field failure reporting, we based communications, etc.)?

RVIEW

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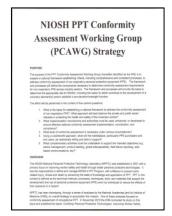
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The Status of Conformity Assessment of PPE in the US

- Few formal requirements exist in the US that PPT be independently tested and certified
 - Respirators require NIOSH testing and approval
 - Third-party certification is required in fire and emergency service standards from NFPA
 - Other workplace PPE such as safety glasses, hard hats and fall protection may be tested by manufacturer to show conformance to a consensus standard





CBRN Agent Approved

See Instructions for Required Component Part Numbers, Accessories, and Additional Cautions and Limitations of Use











The Status of Conformity Assessment of PPT in the US

NIOSH PPT Conformity Assessment Working Group (PCAWG) Strategy

- Manufacturers develop products to meet consensus standards
- American National Standards Institute

Checks and balances in place through litigation





- **Current legal processes do not** penalize for false claims
- **ISEA Draft Conformity Assessment** Standard under development
- **Consensus standard organizations** sometimes incorporate CA in support of performance standards









Guiding Principles for the NIOSH Strategy

Assessment Working Group
(PCAWG) Strategy

NOTICE

Assessment Working Group
(PCAWG) Strategy

Notice

First: Collaborate.

"The National Program should collaborate with other relevant government agencies, private-sector organizations, and not-for-profit organizations to conduct [the] assessment..." (NA Report)

- Second: Do no harm.
 - "The committee recognizes that many conformity assessment processes already in place can fit this framework." (IOM Report)
- Third, Don't re-invent the wheel.

"A single reputable source of information on all certified PPT is needed...[that] could link to lists of certified equipment from accredited third-party organizations." (IOM Report)





PCAWG Members and Consultants







International Personal Protection, Inc.





















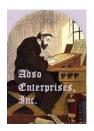






American National Standards Institute

JSJ and Associates







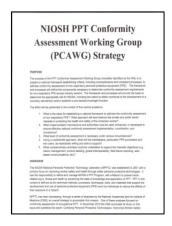




What is our Challenge?

Develop consensus regarding what types of assurance are needed to demonstrate that particular PPE products meet standards to which they are marked.

- What is the basis for establishing a national framework to address the conformity assessment of nonrespiratory PPE?
- What are the appropriate implementation mechanisms and needed authorities?
- What level of conformity assessment is necessary under various circumstances?
- What will the PPE manufacturer and user communities be realistically willing and able to support?

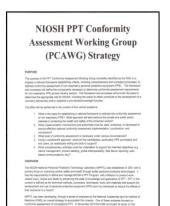


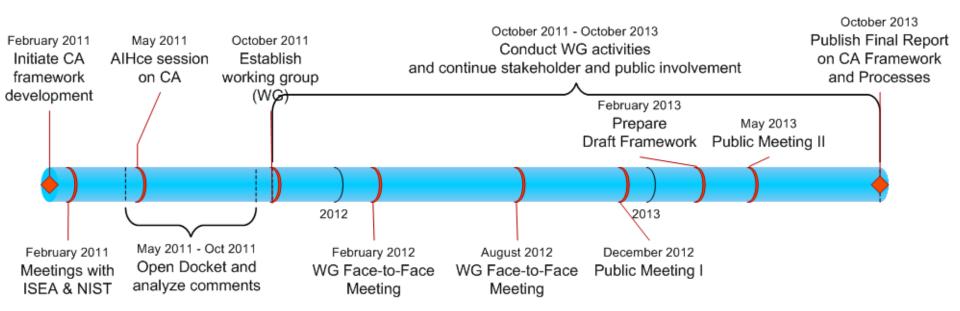






Working Group Schedule









Working Group Approach

Develop a framework for a national strategy for nonrespiratory PPT conformity assessment

NIOSH PPT Conformity
Assessment Working Group
(PCAWG) Strategy

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PROJECT DEFINITION AND ORGANIZATION

(WORKING GROUP)

TERMINOLOGY (SUB-GROUP) PRODUCTS
AND
STANDARDS
(SUB-GROUP)

OF RISK (SUB-GROUP)

SURVEILLANCE DATA (SUB-GROUP)

COMPLIANCE AND ENFORCEMENT (SUB-GROUP) PRIORITIZATION

(WORKING GROUP)

CONFORMITY ASSESSMENT FRAMEWORK AND PROCESSES

(WORKING GROUP)

PROJECT MANAGEMENT

(NIOSH/NPPTL CHAIR)







Terminology: Key Activities



- Identify applicable terms needed to establish consistent language
- Definitions
 - List of important terms
 - List of terms which may be referenced
 - Terms selected for deletion







Terminology: Important Terms

TERMINOLOGY (SUB-GROUP)

- Accreditation
- Accreditation body
- Approval
- Attestation
- Certificates or marks of conformity
- Certification
- Conformance
- Conformity assessment
- Conformity assessment body
- Declaration
- Environmental conditions
- Failure
- First party
- Hazard
- Hazard identification
- Incorrect use
- Inspection

- Non-conformance
- Probability
- Regulations
- Revocation
- Risk
- Risk assessment
- Risk Evaluation
- Risk Management
- Risk Reduction
- Second Party
- Severity
- Supplier's Declaration
- Surveillance
- Third Party
- Type Test
- Unilateral Arrangement

Do these terms capture those needed for the WG products?



Products and Standards: Key Activities

PRODUCTS
AND
STANDARDS
(SUB-GROUP)

- Inventory product and performance standards
- Identify classes of PPE to which specific standards and requirements apply
- Assess national and international conformity assessment processes
- Identify existing third party certifiers of PPE, their current accreditation, and standards to which they test products
- Document and identify PPE integration and interface issues

Outputs will feed into the development of the conformity assessment model(s).







Surveillance Data: Key Activities

SURVEILLANCE
DATA
(SUB-GROUP)

- Over 30 data sources assessed and documented to define data gathering needs
- Case studies and sources of incidents evaluated
- Need for improved approaches identified
 - Assessing PPE failures and inadequacies
 - Reporting incidents of PPE failure
 - Reporting fraudulent or counterfeit PPE in the marketplace

Are there any other databases or sources of information which may provide information on PPE conformity?





Medwatch Adverse Event and Reporting System

SURVEILLANCE
DATA
(SUB-GROUP)

- Voluntary
- Media
 - Electronic
 - Paper (mail or fax)
 - Phone
- 40,000 incidents/year
- Resources
 - 1.5 personnel
 - \$300K/year dedicated to data entry







Compliance and Enforcement: Key Activities



- Assess and document existing national compliance programs
- Enumerate needs, gaps, and deficiencies in these programs
 - Conformity assessment requirements
 - Enforcement authority guidelines for classes of PPE
- Benchmark international conformity assessment programs







Candidate Countries to Benchmark



- Asia
 - o Japan
- Australia
- Europe
 - England
 - Germany
 - Sweden
- North America
 - Canada Ontario
 - Canada Quebec
 - Mexico
- South America
 - Brazil

Are these the right countries?

Which other countries should be considered?





Benchmarking Approach: Survey



Key Issues

- Are CA standards voluntary or required by law, regulation, or other authority?
- What quantitative surveillance data were used in structuring the PPE CA system?
- How were the categories of risk determined?
- What are the major issues concerning compliance and enforcement?
- What successes/benefits have you realized from the program?







Levels of Risk: Key Activities



- Develop appropriate levels of risk model
- Define appropriate use of existing data in the absence of complete surveillance data
- Explore and develop operations research methodologies (expert decision models) to assign risk levels
- Develop a risk assessment process





Working Group Schedule

NIOSH PPT Conformity Assessment Working Group (PCAWG) Strategy

PURPOSE

The purpose of the FPT Confirmly Assessment Working Group, Investige destined on the Will is to prepare a story of hemselve subsidiating Greine, funding comprehensive and consistent prossess in states confirmly assessment of non-respiratory personal protective equipment (FPE). The framework and processes und didn't be comprehen sciences for destinence confirmly assessment impartments for non-registratory PPE across relustry seators. The framework and processes will provide the basis to disasterior has pulgorists and to NORON, considing the splane or better contribute for the entire confirmation of disasteriors has appropriate to the NORON, considing the splane or better contribute for the entire confirmation of disasteriors has programmed to the confirmation of the confirmation of disasteriors has programmed to the confirmation of disasteriors has programmed to the confirmation of disasteriors has provided to the confirmation of disasteriors has been confirmation of disasteriors has provided to the confirmation of disasteriors and the confirmation of disasterior

- What is the basis for establishing a national framework to ad of non-respiratory PPE? What approach will best balance the
- interests in protecting the health and safety of the American worker?

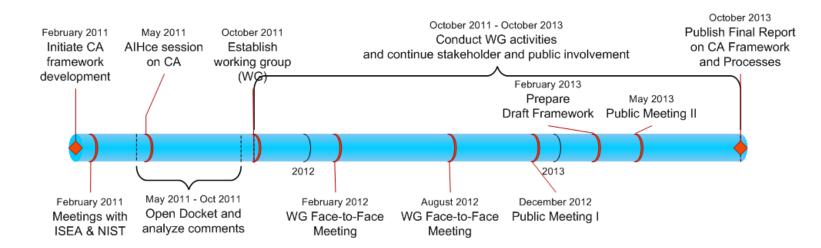
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 What complementary activities could be undertaken to support the intended objectives

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Quality Partnerships Enhance Worker Safety & Health









Visit Us at: http://www.cdc.gov/niosh/npptl/

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.

Thank you!



