

# **National Academy of Medicine Workshop Current Issues in the Assessment of Respiratory Protective Devices: Non-traditional workers and Public Use**

## **Session 4A: Assessment Pathways for Respiratory Protective Devices for Non-Traditional Workers**

**Maryann D'Alessandro, Director NPPTL**

**Jeff Peterson, Conformity Verification and Standards  
Development Branch, NPPTL**

# Session Objectives

- Review the current NIOSH Respiratory Approval Program and conformity assessment process for the occupational use of respirators.
- Explore how existing conformity assessment processes and standards align with the health and safety requirements of non-traditional user groups and how these processes function to deliver technologies to the end user while balancing speed of delivery with safety.
- Discuss what opportunities exist to develop or support conformity assessment processes for respiratory protective devices and control strategies, such as cloth face coverings, that are responsive to the specific requirements of these user groups.
- Discuss conformity assessment models used in other countries, by third-party organizations, and in private industry for the occupational and non-occupational use of respirators and barrier masks.

# NIOSH Personal Protective Technology Program

## National Personal Protective Technology Laboratory



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

NIOSH HAS RESPIRATOR CONFORMITY ASSESSMENT AUTHORITY  
AND

OSHA and MSHA OVERSEE WORKPLACE COMPLIANCE

ALL RESPIRATORY PROTECTIVE DEVICES (RPDs) USED  
IN OCCUPATIONAL SETTINGS

OSHA's  
Respiratory  
Protection  
Standard 29 CFR  
1910.134 requires  
workplaces using  
respirators to  
establish a  
Respiratory  
Protection  
Program.

All  
N95 filtering  
facepiece respirators  
(FFRs)

All Surgical  
N95 Respirators

ALL  
SURGICAL  
MASKS

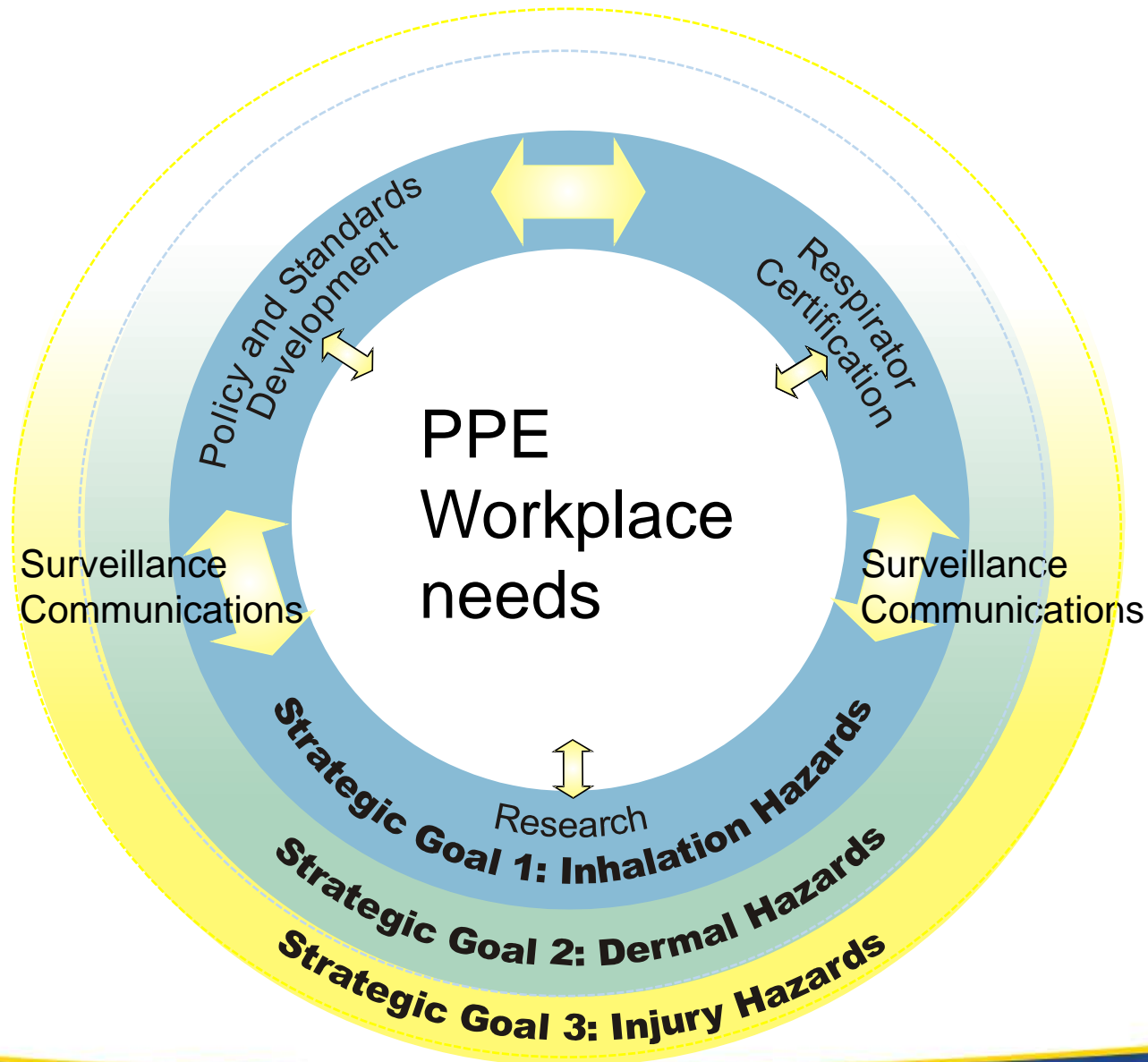
FDA CLEARS  
MEDICAL  
DEVICES

Manufacturers must list  
Surgical N95s with FDA





# NPPTL's responsibilities vary across its three strategic goals.



# Conformity Assessment is important to address worker health and safety.

**“Demonstration that specified requirements relating to a product, process, system, person or body are fulfilled”**

ISO/IEC 17000:2004 Conformity assessment Vocabulary and general principles

- **Help regulators ensure that health, safety or environmental conditions are met**
- **Provide consumers with added confidence**
- **Give the company a competitive edge**



**NIOSH**

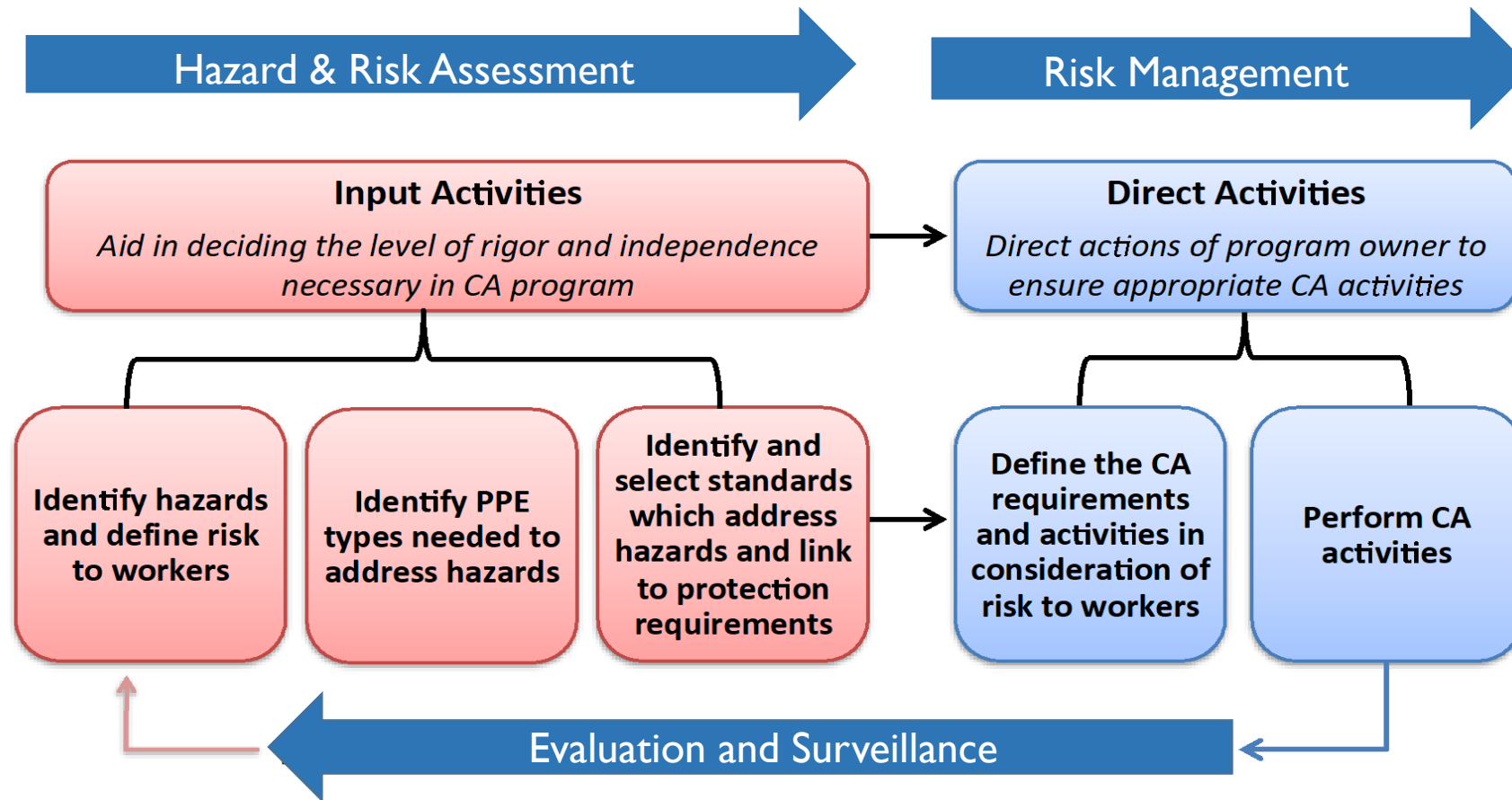


**NIOSH  
and FDA**

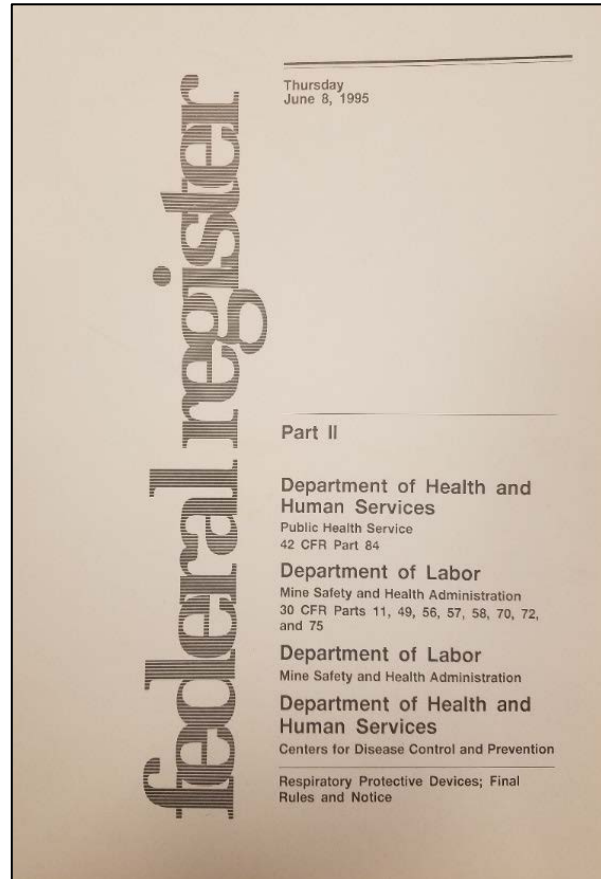


**NIJ**

# The framework establishes a set of principles and provides guidance for PPE conformity assessment.



# NPPTL executes NIOSH's authority to approve respirators— 42 CFR Part 84.



*Two regulatory agencies require the  
use of NIOSH-approved respirators*

Occupational Safety and Health Administration  
(OSHA)

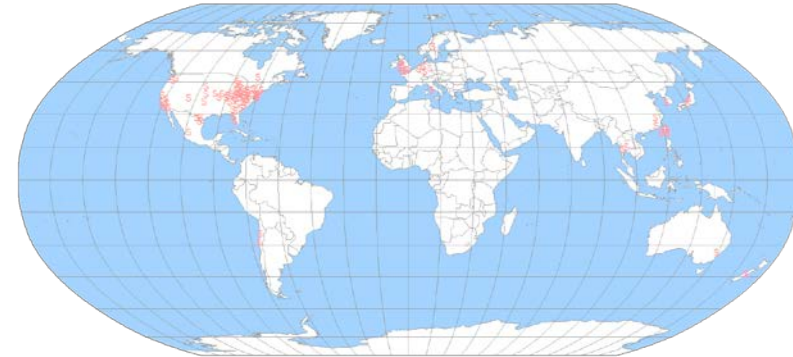
Mine Safety and Health Administration  
(MSHA)



# NPPTL has protected workers from job hazards by developing standards and certifying over 9000 respirators.

Australia	Brazil	Canada	Chile	China	Colombia	Czech Republic
England	Germany	India	Ireland	Italy	Japan	Korea
Latvia	Mexico	Poland	Singapore	Slovenia	Sweden	Switzerland
Taiwan	Thailand	UAE	USA	Vietnam		

- 101 approval holders
  - 15 countries
- 192 manufacturing sites
  - 26 countries



**NPPTL improved the quality of the Nation's inventory of respiratory protection for workers in all industry sectors by making 552 respirator approval decisions and completing 254 respirator audit activities in 2019.**

**In support of the COVID-19 Response, NPPTL has issued 498 respirator approval decisions and completed 538 respirator audit activities since January 1, 2020**

# Types of Certified Respirators

- Air-Purifying Respirators:
  - Powered or Non-Powered
  - Particulate
  - Gas & Vapor
  - Gas masks
  - Combination
- Atmosphere-Supplying Respirators
  - Self Contained
  - Supplied-Air (Airline)
  - Combination



# NIOSH Approval Process Overview

## Receiving/Records Room

1. Receive Hardware
2. Receive Fees
3. Receive SAF & Document

## Initial Engineering Review

1. Confirm Reason for Application
2. Review Content of Application
3. Verify New or Revised Configuration
4. Issue Fee Estimate
5. Assign Appropriate Tests

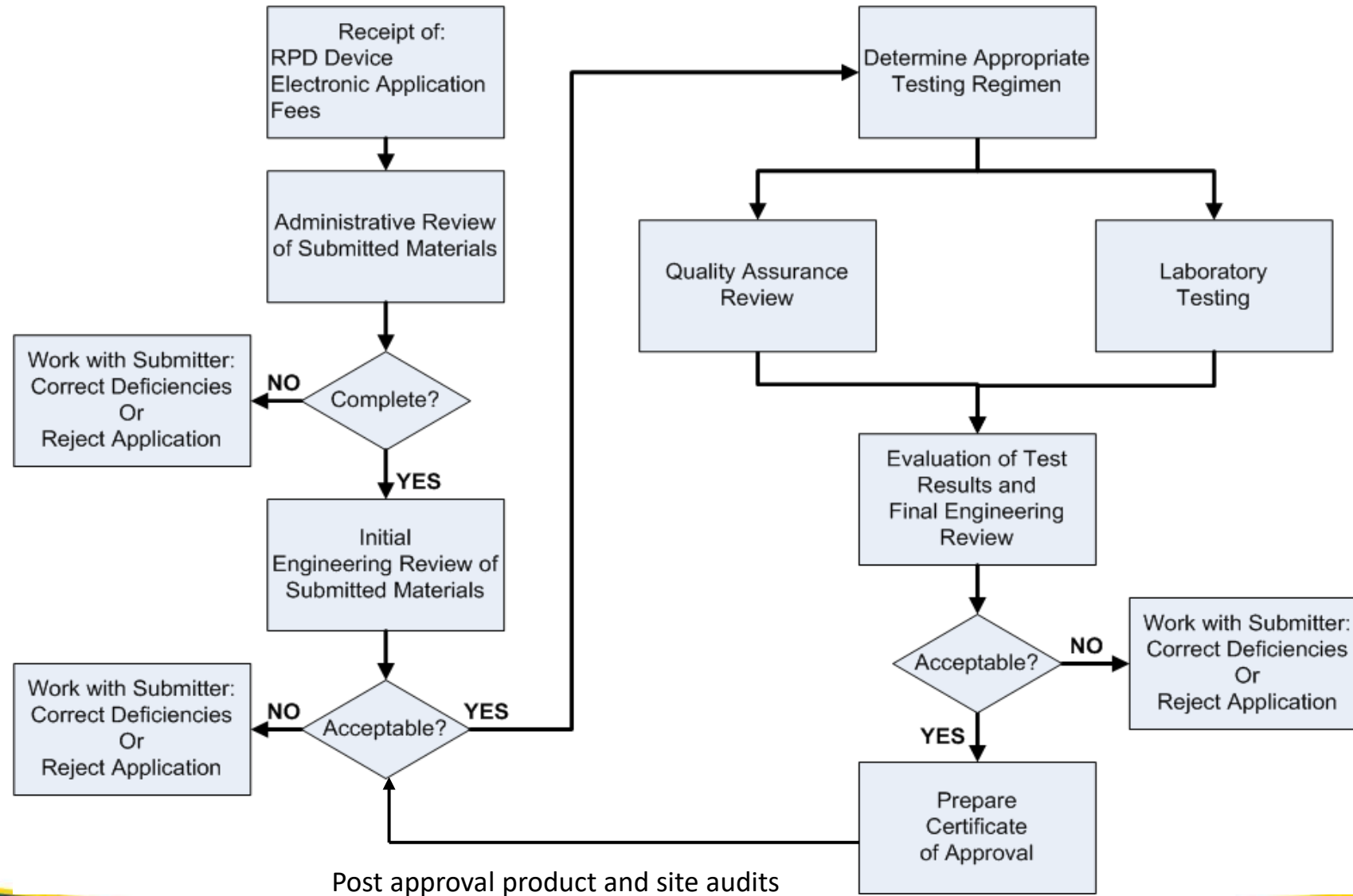
## Testing and Quality Assurance

1. Conduct Assigned Testing
2. Assess QM system for Conformance to Requirements
3. Review Inspection Procedures/Classification of Defects
4. Review Documentation for proper Revision Level

## Final Engineering Review

1. Review Test Data
2. Update NIOSH Parts Database
3. Review and Finalize Labeling
4. Finalize Approval /Denial Package and submit for Concurrence

# NIOSH has a robust respirator approval process that involves many stakeholders.





# Post-approval Product Audits

- Historic approach: Approximately 40-50 models selected each year and purchased on the open market
- Products chosen from the Certified Equipment List using criteria such as:
  - Respirator type
  - Time since last tested
  - Problem history
- In recent years purchased products have focused on FFRs.
- Any test failures resolved through a CIP Investigation
- Current approach: Audit one product per year for each type of product approved.



# Post market evaluation activities provide for effective product conformity and use assessments.



# Site Audit Program ensures manufacturer compliance with approved quality system plans and the respirator performance requirements of 42 CFR 84.

## ■ Audit Frequency

- 2 Years for Production Facilities
- 4 Years for Corporate Offices

## ■ Audit Duration

- Facility Size
- Number of Approvals Held
- Respirator Complexity
- Audit/Field Problem History

## ■ Outcomes

- Approval Holder quality systems and products continue to meet standard.
- Approval Holders assure quality and reliability of respirators.
- Workers have stronger assurance of respirator functionality.





# Quality Partnerships Enhance Worker Safety & Health



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## Thank you!