Project Goals

To develop new comprehensive test standards for certifying multifunction PAPR's (Powered Air Purifying Respirator).
Description

- Respiratory protective devices may include protection against other types of threats or hazards.
  - vision protection,
  - hearing protection
  - head protection
  - isolation from environmental contaminants

- Besides providing respiratory protection, multifunction PAPR's must allow wearers to perform their assigned duties without posing additional burdens.

- The problem is how to objectively evaluate candidate equipment.
  - scientifically valid tests in order to be certified by the Government as reasonably meeting minimum standards.
  - Appropriate standards are not available
Team/Resources

- NPPTL assets
- Human Performance Laboratory at the University of Maryland
  - long history of research in all wearability issues of respirators
  - bioengineering approach
- MSHA collaboration
- Stakeholders
  - equipment manufacturers
  - BCOA, NMA, UMWA
Approach

- **Phase 1:**
  - Stakeholder interviews
    - determine the relative importance of various equipment qualities (vision, communication, head protection)
    - define likely work scenarios
  - 3 months

- **Phase 2:**
  - Develop test criteria
  - Validate
  - 15 months

- **Phase 3:**
  - Follow-up stakeholder interviews
    - determine if any unforeseen problems should modify the proposed standard tests.
  - 3 months

- **Phase 4:**
  - Final report
    - results
    - draft standards
  - 3 months
Sole source procurement contract to the
University of Maryland
Contract 200-2002-00531

MSHA support