

Frequency of Fit Testing – FY13 (927Z1NU)

Objective

The specific aims of this project are to:

- 1) Determine – for time intervals of 6, 12, 18, 24, 30, and 36 months – the changes in respirator fit,
- 2) Determine – for the same time periods – the number of instances when a subject's fit becomes unacceptable
- 3) Determine the corresponding percentages of test subjects whose respirator penetration changes for different degrees of changes and whose fit becomes unacceptable during the these time intervals
- 4) Assess the extent to which changes in fit are associated with recognizable changes in facial anthropometrics
- 5) Investigate the correlation between respirator fit and subject characteristics at every six month interval

Project Scope

▪ A laboratory study will be conducted to assess causative factors affecting temporal changes in respirator fit. Initially, 229 subjects were enrolled and 175 subjects remain. Subjects perform fit testing every 6 months over a three year period. Among the possible causative factors are: weight gain or loss, face size change, 3-D scans and nose shape change.

Milestones FY13

- Q1 Completed data reduction for the fifth study
- Q2 Completed data collection for the sixth visit
- Q3 Complete data reduction for the sixth visit
- Q4 Complete data collection for the seventh visit

Applicable Standards related activities

- 29 CFR 1910.134
- ISO TC94 SC 15

Key Partners

- Tongji Medical College in China
- Frazer Health, BC Canada

Stakeholders

- OSHA, MSHA, ANSI, AIHA, ISO
- Respirator Users
- Cal-OSHA



Outputs

- Manuscripts published or submitted to peer review journals **(1)**
- Presentations to stakeholders or conferences **(2)**
- Standards committee meetings & public meetings **(0)**

Outcomes

- Project data is used by NIOSH, CDC, OSHA, ISO, and ANSI in guidance documents, standards, or regulations
- Employers and safety professionals will be more likely to follow OSHA regulations and conduct fit testing at the appropriate frequency
- Other researchers utilize the project outputs to initiate new research related to fit testing

Updated: 03 April 2013