

**Session 51**  
**Panel: Performing Work Safely**

Panel Reporter: Judy Connell, Fluor Hanford

The purpose of this panel was to share lessons learned and to facilitate a workshop on safety, focusing on job hazards analysis and personal protective equipment (PPE). Topics discussed included work planning to identify and mitigate hazards, a discussion of OSHA-Assigned Protection Factors, ways to reduce heat stress while working in hazardous environments, and the salient features of launderable and single-use PPE.

The following individuals participated in the panel:

- Tony Umek, Fluor Hanford
- Patricia Worthington, DOE HQ/HS-10
- Mike Madison, EnergySolutions
- Bill Morrison, BWXT Pantex
- Bill Smoot, CH2M HILL Hanford
- Larry Waggoner, Fluor Hanford
- Greg Perkins, Fluor Hanford
- Grant Rowe, Bullard Corp.
- Heatherly Dukes, Unitech
- John Steward, OREX.

After a brief introduction by Tony Umek and then a short opening by Patricia Worthington, the panel was broken into four sections: Job Hazard Analysis, Heat Stress, Respiratory Protection, and Personal Protective Clothing. Each section had two speakers, with each speaker allotted 10 minutes.

Dr. Worthington focused her remarks on air suits that receive than air line (hose) connected to a source of breathing air, i.e., supplied-air suits. Recently promulgated 10CFR851 requires that respirators used by DOE either be NIOSH certified or certified by the DOE accreditation program as specified in DOE STD 1167-2003. In the past several years, new types of air suits have been developed by European manufacturers. In addition, several DOE sites have informally expressed interest in using these suits. In response, HS-11 plans to modify DOE STD 1167-2003 to expand the guidance on using the results of the tests performed by European testing laboratories *in lieu* of performing such tests at a DOE facility. HS is evaluating tests specified in European standards with those specified in the DOE Standard to determine if such tests are equivalent to, or better, than the DOE tests. There will be a DOE Chemical Safety workshop (March 13-15) during with a two-hour presentation on supplied-air suits will be made.

Job Hazard Analysis

Presenters: Mike Madison and Bill Morrison

These presenters discussed the approaches used at their respective organizations for planning projects and associated work evolutions, long-range and on a daily basis. They discussed the relationship between the Integrated Safety Management System

(ISMS) and Job Hazards Analysis, including the use of automated tools/systems for analyzing hazards.

### Heat Stress

Presenters: Bill Smoot and Larry Waggoner

These panelists discussed the impact of performing numerous labor-intensive cleanup activities that increase the potential for heat stress. They discussed the process of using ISMS and As Low As Reasonably Achievable (ALARA) principles as work is being planned to better prepare for the potential of heat stress. In particular, the use of monitoring for heat strain/stress was discussed for its value in assessing the effectiveness of engineering controls (e.g., monitoring core body temperature and pulse rate), as were other innovations to give workers better protection and improve their productivity (e.g., cooling vests, breathable PPE, and recirculating air conditioning).

### Respiratory Protection

Presenters: Greg Perkins and Grant Rose

Mssrs. Perkins and Rowe discussed the recent change in the OSHA Rule for Protection factors (Federal Register, August 2006). They focused on the way respiratory protection integrates into the overall worker-protection package, such as high ambient temperature, electrical hazards, contamination controls, and elevated work locations. Included in their discussion was a comparison between commercial and DOE respiratory-protection programs, as well as an evaluation of advances in respiratory protection that can offer higher protection factors.

### Personal Protective Clothing

Presenters: Heatherly Dukes and John Steward

These two panelists represented two different currently used industry products: one launderable; the other, single-use or disposable. They discussed industry experience with each. The presenters discussed ALARA and cost-per-use of each of the two types of PPE, along with their attributes: comfort, logistics, heat stress, and personal contamination.

### Attendance At The Session

This session started late for two reasons: the previous session ran over time; technical difficulties with the presentations loaded onto the system. The audience ranged between 35 and 40, from the beginning to the end of session. There was good discussion and the panelists showed enthusiasm for their topics and were extremely knowledgeable.

Next year's session will provide an update on the implementation/results of 10CFR85, as well as a discussion of on electrical safety and DOE's renewed focus on the Voluntary Protection Program, comparing DOE and Contractor experience including associated mentoring programs.