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## From the Director's Desk

In the wake of the Sago mining disaster of 2006, Congress passed the Mine Improvement and New Emergency Response Act of 2006 – known as the MINER Act. The legislation mandated a range of government actions to prevent catastrophic deaths and injuries in mines, and to improve emergency preparedness and rescue for miners trapped underground should catastrophes occur. Recognizing NIOSH's scientific leadership, the legislation gave us several responsibilities for research to help achieve these critical goals.

As the 2006 Sago and Darby incidents tragically showed and the Crandall Canyon disaster of August 2007 reaffirmed, underground mining remains a dangerous occupation. NIOSH takes its duties under the MINER Act very seriously, as we do with every aspect of our mining safety and health program. In the past year and a half, we have worked diligently with our diverse partners to design, conduct, fund, and apply research to address the needs highlighted by Congress.

To help inform our stakeholders about progress in this regard, we recently revised and updated our web page describing the strategic research efforts under the MINER Act. The revised web page assembles a vast set of information about our various initiatives under the program, organizes it in a systematic and easy-to-read way, and provides current information about the status of those various efforts. I invite you to visit the web page at <http://www.cdc.gov/niosh/mining/mineract/mineract.htm>. It is an excellent ongoing resource.

One particularly critical research need, among many, is the development of improved communications technologies to allow miners trapped underground, after a mine explosion or collapse, to communicate with personnel on the surface. Both wired and wireless communications systems face great physical challenges and barriers in underground coal mines.

The effort to overcome or bypass those immense natural hurdles requires a practical knowledge of these technologies in the complex and unforgiving environment of underground coal mines. It also demands realistic but creative analysis to identify potential solutions, weigh their respective chances of success, and focus on those that have the greatest likelihood of achieving the needed strides.

Recently, NIOSH accomplished a significant step toward the development of an improved wireless system. Tests found that transmissions from a two-way wireless voice communications system were successfully received over a two-mile distance in two underground coal mines despite twists and turns in the mine tunnels. To date, such physical barriers in underground mines have limited wireless communications to much shorter distances. This has been a basic obstacle in improving surface-to-mine wireless communications. More details about this progress can be found at <http://www.cdc.gov/niosh/mining/commtrack/pdfs/npinr.pdf>.

While this is an important step forward in our research, it does not mean that this work is complete, or that our tests have yielded a final product. Next steps of research will follow, to address several questions that remain about the application of these findings. We have a clear recognition that we are expected to deliver the highest-quality results that we can, while heeding the sense of urgency that all of us feel in the terrible shadow of events in West Virginia, Kentucky, and Utah. I look forward to noting further progress in future issues of *eNews*.

## Follow-up: Prevention through Design Workshop

The first Prevention through Design (PtD) Workshop was held July 9 – 11, 2007, to launch a National Initiative aimed at eliminating occupational hazards and controlling risks to workers “at the source” or as early as possible in the life cycle of items or workplaces. The workshop attracted more than 200 participants from diverse industry sectors and disciplines. During the workshop, participants engaged in industry-centered breakout sessions to identify opportunities and barriers, and to develop recommendations for each industry. Participants also took part in cross-industry breakout sessions where they mapped out the top over-arching issues for PtD in the areas of research, education, practice, and policy. The output from the workshop will be used to develop a strategic plan that highlights actions and milestones to institutionalize the concept in workplaces throughout the United States. While NIOSH is coordinating the initiative, PtD is a collaborative endeavor and current partners include the American Industrial Hygiene Association, the American Society of Safety Engineers, the Center to Protect Workers’ Rights, Kaiser Permanente, Liberty Mutual, the National Safety Council, the Occupational Safety and Health Administration, ORC Worldwide, and the Regenstrief Center for Healthcare Engineering. Other partners are welcome to join. More information on PtD is available at <http://www.cdc.gov/niosh/topics/PtD/>.

## NIOSH Offers Resources for Workers in Disaster Recovery and Emergency Response

In the wake of two tragic events, the Minneapolis bridge collapse and the Utah mine roof collapse, NIOSH prepared and posted to our Web site resources for rescue and recovery workers. The August 2 NIOSH Update, <http://www.cdc.gov/niosh/updates/upd-08-02-07.html>, describes strategic measures workers can take to avoid occupational hazards at rescue and recovery sites. Additional resources are available on the NIOSH emergency response topic page, <http://www.cdc.gov/niosh/topics/emres/natural.html>. The August 7 Update, <http://www.cdc.gov/niosh/updates/upd-08-07-07.html>, focuses on resources for mine operators and mine workers to avoid risk of roof falls, to anticipate hazards in retreat mining operations, and to design safe mining operations. Additional information can be found on the NIOSH Mining Web page, <http://www.cdc.gov/niosh/mining>.

## In Memoriam: Nandakumar Kittusamy

NIOSH remembers Dr. Nandakumar Kittusamy, who died unexpectedly August 6, 2007, in India. He served as a Biomedical Engineer at the NIOSH Spokane Research Laboratory from May 2001 until April 2007. His research included the study of the effects of whole body vibration on heavy equipment operators and active technological measures to prevent lumbar back pain in long-distance truckers. In addition to his research at NIOSH, Dr. Kittusamy volunteered for and was deployed with a World Health Organization team to Banda Aceh, Indonesia, during the 2004 earthquake and tsunami, where he provided structural assessments of four local hospitals, permitting their emergency return-to-use. Earlier this year, the opportunity arose for him to return to his southern India homeland, where he served as Professor and founding Coordinator for the Industrial Engineering Program at the Kumaraguru College of Technology until the time of his death. He will be missed by his many U.S., Indian and international colleagues.

## Bringing Toxicology to Global Issues in Occupational and Environmental Public Health

Several NIOSH researchers are scheduled to speak in Louisville, KY, at the “Professional Conference on Industrial Hygiene” and the pre-conference symposium, “Bringing Toxicology to Global Issues in Occupational and Environmental Public Health.” The symposium will take place October 18 – 19, 2007, followed by the conference on October 20 – 23. The conference is sponsored by the American Industrial Hygiene Association’s Academy of Industrial Hygiene. Visit <http://www.aiha.org/TheAcademy/html/pcih.htm> to learn more about the conference and <http://www.aiha.org/TheAcademy/html/pcih-symposium.htm> for details on the symposium.

## Call for Abstracts

Abstracts will be accepted until September 14 for the "18<sup>th</sup> Annual Construction Safety and Health Conference," February 12 – 14, 2008, in Rosemont, IL. NIOSH, the Center to Protect Workers' Rights (CPWR) and other government agencies and employer and industry associations are cosponsors of the conference. The National Occupational Research Agenda (NORA) Construction Sector Council will present the top 10 research priority areas identified for the construction industry, and participants will have the chance to comment on the draft construction goals. More information on the conference, including details on abstract submission, can be found on the CPWR Web site, <http://www.cpwr.com/whatsnew.html#conferences>.

## Look for Us

The NIOSH Booth will be on exhibit at:

- "Association of Occupational Health Professionals in Healthcare." September 26 – 28, 2007, in Savannah, GA. Visit us at booths 10&11.
- "NanoTX 07." October 3 – 4, 2007, in Dallas, TX. Visit us at booth #814.
- "National Safety Council, Chicago, IL, October 14 – 18, 2007. Visit us at booth #2379. <http://www.nsc.org>
- International Association of Fire Fighters, Redmond Symposium, Chicago IL, October 21 – 25, 2007. <http://www.iaff.org>
- Pittsburgh Coal Mining Institute of America Annual Conference, Canonsburg PA, October 25 – 26, 2007.

## r2p Corner

### Power Tool Noise Reduction 101

College students get involved in occupational safety and health. Starting again this fall, NIOSH will sponsor college engineering student groups to evaluate and redesign power tools to reduce noise emissions as part of a class project. The projects are made possible by multiple partnerships between NIOSH and Michigan Tech University, Penn State University, Iowa State University, Purdue University, and the University of Cincinnati. These partnerships help to reduce risk of noise induced hearing loss among construction workers while promoting interest in occupational safety and health to engineering students. To learn more, visit <http://www.cdc.gov/niosh/topics/noise/collegeStudents/studentpresentations.html>.



## NORA

### NORA FY08 Intramural Funding Awards Announced

NIOSH recently announced the selection of several new internal NORA projects. The approved projects are expected to make substantial contributions to workplace safety and health. The selections were made following peer review by experts from outside NIOSH. Some focus on the highest priority occupational safety and health issues, such as deaths due to falls, trench cave-ins and tractor roll-overs. Others will develop additional needed surveillance information or will close knowledge gaps in emerging issues, such as long-term exposure to low-level radiation and exposure to new nanoparticles. More information about these NORA projects is available at <http://www.cdc.gov/niosh/updates/upd-08-23-07.html>. Future eNews articles will describe other facets of NORA. Address questions to [NORACoordinator@cdc.gov](mailto:NORACoordinator@cdc.gov).



## Around NIOSH

### New Appointments...

NIOSH announces the permanent appointments of Dr. Anita Schill as the NIOSH Associate Director for Science and Dr. Jim Newhall as the Director of the NIOSH Office of Extramural Programs. Dr. Schill has served as the Interim ADS since July 2006. Dr. Newhall has served as the Acting OEP Director since March of this year.

### New Partnerships...

In July, the NIOSH Fire Fighter Fatality and Investigation Program (FFFIPP) established an interagency agreement with the National Institute for Standards and Technology (NIST) to support development of a computer simulation model of the warehouse fire that resulted in the deaths of nine fire fighters in Charleston, SC, in June. This model will provide important information on fire behavior for the NIOSH investigation and has implications generally for fighting structure fires that involve a high fuel load as well as the application of sprinkler systems. Contact Tim Merinar at [TMerinar@cdc.gov](mailto:TMerinar@cdc.gov) for more information, learn about the FFFIPP at <http://www.cdc.gov/niosh/fire>, and see examples of previous NIST fire models at <http://www.fire.nist.gov>.

### New Conferences...

NIOSH, along with the Technical Support Working Group, the National Institute of Justice, the National Fire Protection Association, and the International Safety Equipment Association, will be cosponsoring a "Personal Protective Equipment Conference" November 28 – 30, 2007, in Fort Lauderdale, FL. The conference will highlight emerging technologies in the area of personal protective equipment. Included will be a seminar series on standards and next-generation tools, educational workshops, round-table discussions on the future directions for PPE research and design, and an exhibition of new technologies. For more information visit <http://www.tswg.gov/tswg/home/home.htm> and click on the Personal Protective Equipment Conference Banner.

### International Participation on Behalf of the U.S. Health Attaché to Vietnam

Dr. Marie Haring Sweeney participated in the Joint United States - Vietnam Advisory Committee on Agent Orange on behalf of the U.S. Health Attaché to Vietnam. The meetings were held in Hanoi, Vietnam, August 14 – 15, 2007. As part of the meeting, the committee made a site visit to view areas on the grounds of Danang Airport, where interim remediation activities will occur this fall.

### New Publications...

NIOSH collaborated with the U. S. Environmental Protection Agency Chemical Emergency Preparedness and Prevention Office and the Ethylene Oxide Sterilization Association (EOSA) to update the NIOSH Alert "Preventing Worker Injuries and Deaths from Explosions in Industrial Ethylene Oxide Sterilization Facilities." Following an explosion at an industrial [EtO](#) sterilization



facility, the U.S. Chemical Safety Board (CSB) used the original Alert from 2000 during its investigation. Subsequently, the NIOSH Alert was revised to incorporate suggestions from the CSB and to include recent National Fire Protection Association standards, references for conducting a process hazard analysis, and additional information on monitoring EtO concentrations in the sterilizer before vents are activated. <http://www.cdc.gov/niosh/docs/2007-164>.

NIOSH has developed a new safety and health topic page for workers with developmental disabilities. <http://www.cdc.gov/niosh/topics/wdd>. This site highlights a state-specific database of safety and health information that was developed for this working population, as well as summarizes some of the key points that were derived from several Health Hazard Evaluations and other published resources.

## News From Our Partners

### **NIOSH Awards Deep South Center for Occupational Health and Safety 5-Year Research Grant**

NIOSH has awarded a five-year research grant to the University of Alabama at Birmingham's Deep South Center for Occupational Health and Safety. The grant will provide support to several new initiatives: diversity recruitment, establishment of a summer institute for undergraduate students, and a new study of managed preventive care for employee health. The Deep South Center is one of 16 Education and Research Centers (ERCs) funded by NIOSH. More information about the NIOSH ERCs can be found at <http://www.cdc.gov/niosh/oep/centers.html>. Visit <http://www.soph.uab.edu/dsc> to learn more about the Deep South Center.

## Communication Products

### **Technology News 525 “NIOSH Releases New Skills Training Aid: Walk-Thru Roof Bolting Machine Trainer's Guide”**

DHHS (NIOSH) Publication No. 2007-145 <http://www.cdc.gov/niosh/mining/pubs/pubreference/outputid2456.htm>



### **Information Circular 9500 “Explosion Pressure Design Criteria for New Seals in U.S. Coal Mines”**

DHHS (NIOSH) Publication 2007-144 <http://www.cdc.gov/niosh/mining/pubs/pubreference/outputid2477.htm>.



### **NIOSH Health Hazard Evaluation Report: “Evaluation of occupational hazards in the construction and service sectors in the immediate aftermath of Hurricane Katrina.”**

NIOSH responders were deployed to New Orleans and Baton Rouge, LA in September and October 2005 to assist Federal, state, and local agencies in addressing occupational safety and health issues, to perform health and injury surveillance and exposure assessments among workers, to perform outreach to vulnerable workers, and to develop and disseminate occupational health information. The full report is available at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2005-0369-3034.pdf>.

### **New Format for NIOSH Health Hazard Evaluation Reports**

*eNews* Readers: Please be sure to check out the new HHE layout found in the report below. We have changed the font and page layout and incorporated more data tables and photographs with the text. The content is more streamlined and the methods are summarized, with technical details moved to the appendices. Let us know what you think. Send your comments to [NIOSHNews@cdc.gov](mailto:NIOSHNews@cdc.gov).

### **NIOSH Health Hazard Evaluation Report: “Evaluation of noise exposures in the service sector.”**

NIOSH investigators responded to a management request for an HHE at an animal shelter to assess the noise levels from the barking of dogs experienced by workers in the kennel area. Noise exposure levels for workers were measured and hearing tests conducted on employees. NIOSH investigators recommended establishing a hearing loss prevention program, and providing and wearing hearing protection when entering the kennel area. The full report is available at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2007-0068-3042.pdf>.

## Upcoming Events

### Call for Abstracts

- “2008 World Safety Conference and Exposition,” June 2 – 6, 2008, Las Vegas, NV. Deadline is September 14, 2007. <http://www.nfpa.org/wsce>.
- “2008 American Industrial Hygiene Conference and Exposition,” May 31 – June 5, 2008, Minneapolis, MN. Deadline is October 2, 2007. <http://www.aiha.org/abstract.html>.
- “2008 ASTM Boulder Conference on Surface and Dermal Sampling,” August 4 – 8, 2008, Boulder, CO. Deadline is November 12, 2007. Kevin Ashley in the NIOSH Division of Applied Research and Technology is the Symposium Chair. [http://www.astm.org/cgi-bin/SoftCart.exe/filtrexx40.cgi?U+my+store+swqs8906+-P+EVENT\\_ID+1080+/usr6/htdocs/astm.org/SYMPOSIA/callforpapers.frm](http://www.astm.org/cgi-bin/SoftCart.exe/filtrexx40.cgi?U+my+store+swqs8906+-P+EVENT_ID+1080+/usr6/htdocs/astm.org/SYMPOSIA/callforpapers.frm)
- “14<sup>th</sup> International Society for Respiratory Protection,” September 14 – 18, 2008, Dublin, Ireland. Deadline is June 30, 2008. <http://www.isrp.com/dublin/index.html>.

### **U.S. Department of Justice and Department of Homeland Security “Technology for Critical Incident Preparedness”**

November 6 – 8, 2007, San Francisco, CA.

<http://www.ctc.org>

### **International Association of Fire Fighters’ “Nineteenth Symposium on the Occupational Health and Hazards of the Fire Service”**

October 21 – 25, 2007, Chicago, IL.

<http://www.iaff.org/events/07redmond/homepage.asp>

### **“International Roofing Expo 2008”**

February 21 – 23, 2008, Las Vegas, NV. <http://www.theroofingexpo.com/Roofing07/public/Content.aspx?ID=6980&left=0&Nav=0>

<http://www.theroofingexpo.com/Roofing07/public/Content.aspx?ID=6980&left=0&Nav=0>

### **“Fire Department Instructors Conference 2008”**

April 7 – 12, 2008, Indianapolis, IN.

<http://fdic08.events.pennnet.com/fl/index.cfm>

### **“American Association of Occupational Health Nurses”**

April 25 – May 2, 2008, Salt Lake City, UT.

<http://www.aaohn.org/education/symposium-expo/index.cfm>

### **American Society of Safety Engineers “SAFETY 2008” Professional Development Conference and Exposition**

June 9 – 12, 2008, Las Vegas, NV.

<http://www.asse.org/speakerpage08>

**“12<sup>th</sup> US/North American Mine Ventilation Symposium”**

June 11 – 18, 2008, Reno, NV.

<http://www.unr.edu/ventsymp2008>

**“International Association of Fire Chiefs Fire Rescue International 2008”**

August 14 – 16, 2008, Denver, CO.

<http://www.iafc.org>

**Word of the Month**

**Ethylene Oxide:** A flammable gas used in industrial sterilization facilities to sterilize equipment and products for the health-care and food industries.

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