IN MEMORY
Senator Ed Mayne—1945~2007

Ed Mayne was born within the site of the gigantic Bingham Open Pit Copper Mine, graduated from Kearns Jr. High School and Granger High School, and went on to Snow College in Southern Utah. He later transferred to the University of Utah, while working at the Bingham Copper Mine. Ed was a hard rock miner by occupation for 14 years. During this time he became a spokesman for Utah's working families, retirees and for people without voice to State, Federal, City and County governments, where laws are deliberated that impact people.

Senator Mayne has been a strong supporter of the RMCOEH since its inception in 1977, building a broad bipartisan coalition. He was responsible for the passage of three bills with broad bipartisan support, one in each of the last three general legislative sessions, that have provided great benefits to our Center.

Ed Mayne, as an RMCOEH Advisory Board Member, was spotlighted in the last issue of this newsletter.

At the age of 31, he was elected as the state president of the AFL-CIO, the then-youngest ever elected. He was a fixture (a piece of furniture that cannot be moved) on Capitol Hill long before he was the Senator for his beloved Salt Lake County Westside.

Senator Mayne was the recipient of many awards. One of the latest was the Excellence in Workplace Safety Award, awarded on October 11, 2007, for his efforts on behalf of all working Utahns. Workers' Compensation Fund also recognized him, at the same Conference for all his contributions.

The RMCOEH will truly miss, our friend, Senator Ed Mayne and we look forward to our association with Karen Mayne, who has been appointed Senator.

His web site (www.edmayne.com) holds many tributes that enlighten on the character of this good man. Please visit it.

The Rocky Mountain Center
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Gateway to OSH
Occupational Safety and Health

Truckers Health Study
Grant Awarded to RMCOEH

There has been significant growth of the trucking industry in the United States over the past decade with the transportation and utilities sector representing almost 5 million workers and approximately 4% of the US workforce. Truck drivers are a unique population for study because of relatively poor health, poor utilization of the traditional health care system and the impact of truck accidents on public health and safety. For example, the fatal crash rate for large trucks is 50% greater than the rate for all vehicles on the roads. In 2003 there were 6.8 non-fatal injuries per 100 full-time workers, 50% of those resulted in lost days, and 1.1 injuries per hundred full-time workers resulted in a job restriction or a job transfer. In the trucking industry in 2003, there were 517 fatal injuries, 9% of total occupational fatalities. Obese commercial truck drivers (BMI ≥ 30 kg/m²) are reported to have a significantly higher accident rate (>2 times) than non-obese commercial truck drivers.

RMCOEH has been awarded a NIOSH grant to measure risk factors and calculate prevalence rates for chronic illnesses of 1,000 commercial drivers, measure health status as well as develop a health promotion program specifically for truck drivers.

Dr. Kurt Hegmann, primary investigator for this study, and the research teams plan to administer questionnaires that contain both the medical history items from the Commercial Driver Medical Exam (DOT) form and additional measures of the driver's risk factors for chronic illnesses and health status [e.g., history of diabetes, cardiovascular disorders, low back pain, sleep apnea, lipid disorders, exercise, tobacco, over the counter and prescription medication use, etc.].

Inside this Issue:

Advisory Board Spotlights 2
WCF Scholarships Awarded 3
SB159 & HB009 Update 3
Upcoming Continuing Education 4
On-line Courses Viewed 4
RMCOEH News Corner 5-6

Continue on page 3
Dr. Howard Leaman is a member of the RMCOEH Advisory Board and has been involved with the Rocky Mountain Center since his Occupational Medicine training there in 1982. He has practiced Occupational Medicine for over 20 years in a variety of settings, including corporate, transportation, and in clinics.

After finishing over 11 years as group Medical Director for Intermountain WorkMed Clinics, he recently transitioned his practice to sleep medicine. His focuses are on workplace safety (particularly in transportation), fitness for duty, and accident prevention. He has completed the Sleep Medicine Fellowship at LDS Hospital, in addition to previously having completed residencies in Internal Medicine and Occupational Medicine. He is certified by the American Board of Internal Medicine, American Board of Preventive Medicine (in Occupational Medicine) and recently passed his Sleep Medicine subspecialty examination.

Dr. Leaman has organized outstanding monthly Occupational Medicine Grand Rounds at LDS Hospital which have been co-sponsored by the RMCOEH. Numerous interdisciplinary lectures have been given and provided additional OM residency training experiences.

His practice is located at the Intermountain Sleep Disorders Center, a program of Intermountain Health Care.
009, the research project which was sponsored by Rep. Joseph Murray in the 2006 Legislative Session, to conduct a study of cancer and other illness rates among firefighters and drug enforcement officers who are potentially exposed to toxic agents in their professions, is in full swing. As of the time of this publication, we have 28 law enforcement municipalities/agencies that have agreed to participate. We also have 9 firefighting agencies that have agreed to participate.

To date, the agencies who have agreed to participate represent 2,535 law enforcement officers and 1,890 firefighters. Thus it would appear we are enrolling the number of potential participants that we had originally sought when we started this study.

The study involves web based questionnaires that are also working well. Participants have been asked to participate by logging on to our secure web page and answering a questionnaire. We also have trained staff who have conducted interviews by phone for those who do not have or do not utilize computers or internet access. We look forward analyzing the data and returning results to the Legislature and participants.

Furthermore the research team will obtain blood pressure, heart rate, fasting blood samples to measure total cholesterol, HDL cholesterol, triglycerides, markers for both inflammation and diabetes and a measure of sleepiness. This study will try to find links between lifestyles of truck drivers and individual health outcomes and crash risks.

A follow-up phase will include developing a health promotion program for truckers based on results identified in the first stage of this study to target the specific needs of the commercial truck driver. This program will consider both lifestyle factors, such as diet and exercise, as well as occupational factors.

We at RMCOEH are very excited about this opportunity to improve the health of truck drivers and improve the safety of all motorists. We need companies interested in participating. If you are interested in participating in this study, or have any question, please contact Matt Thiese at (801) 587-3322.
 Graduate courses in the areas of ergonomics, safety and human factors engineering have been offered for several years as part of a distance-based education program at ATK developed by the Department of Mechanical Engineering at the University of Utah and RMCOEH. As part of this program, the regular on-site class lectures for these Mechanical Engineering courses are taped and made available within hours for on-line viewing. There are approximately 35-40 hours of course content for each course, and one or two of these courses are offered each semester. Consideration is now being given to also offering these courses to practicing professionals as part of the RMCOEH Continuing Education Program. The lecture material would be the same as for on-site students, but homework, labs, and exams would require at least some modifications.

This proposed expansion of this program involves a joint effort between Dr. Don Bloswick, RMCOEH Director of Ergonomics and Safety and Connie Crandall, RMCOEH Director of Continuing Education. The development team is interested in determining the level of interest in these potential CE courses and whether there are persons interested in being part of a pilot test during the last part of Autumn 2008 or during Spring 2009. Please contact Ms Crandall (801-581-7182, Connie.Crandall@hsc.utah.edu) if you are interested and/or have questions relating to ABIH certification points or CEUs, and contact Dr. Bloswick (801-581-4163, bloswick@eng.utah.edu) if you have questions relating to course content or method of instruction.

### January Courses
- OSHA 510: Occupational Safety & Health Standards for the Construction Industry
- Safety Program Management (Night Class)
- Asbestos Worker Refresher (In Spanish)
- OSHA 500: Trainer Course in Occupational Safety and Health Standards for the Construction Industry
- The Practical Chemistry of Hazardous Materials
- Lead Risk Assessor Refresher
- OSHA 502: Update for Construction Industry Outreach Trainers
- OSHA 6000: Collateral Duty Course for Other Federal Agencies

### February Courses
- 20th Compensable Disability Forum: Update 2008
- OSHA 511: Occupational Safety & Health Standards for General Industry
- Respiratory Protection & Fit Testing
- 40 Hour Hazardous Waste Operations & Emergency Response Course
- Pulmonary Function Testing
- CAOHC-Approved Occupational Hearing Conservation

### March Courses
- Personal Protective Clothing & Use
- Indoor Mold Contamination: Inspecting & Assessing the Risk
- 8-Hour Hazwoper Refresher
- OSHA 3095: Electrical Standards
- OSHA 2264: Permit-Required Confined Space Entry

### April Courses
- Six Sigma, Lean Enterprise, & the Health, Safety & Environmental Professional
- Asbestos Contractor/Supervisor Refresher (Moab, UT)
- 40 Hour Hazardous Waste Operations and Emergency Response Course (HAZWOPER)
- OSHA 500: Trainer Course in Occupational Safety and Health Standards for the Construction Industry
- 6th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium
- Asbestos Abatement for Contractors & Supervisor

### May Courses
- Certified Hazardous Materials Manager Review Course
- Decontamination Specialist Training
- OSHA 501: Trainer Course in Occupational Safety and Health Standards for General Industry
- Environmental Issues & Regulations (Night Class)
- Asbestos Contractor/Supervisor Refresher
- Asbestos Inspector Refresher (Green River, WY)

### June Course
- Physical Hazards in the Workplace (Industrial Hygiene Certificate Program)
- OSHA 6000: Collateral Duty Course for Other Federal Agencies
- International Air Transportation Association (IATA) Training
- OSHA 2225 Respiratory Protection
- Air Sampling for Toxic Substances

### On-line Courses

For additional information on CE classes, please visit the continuing education section of the RMCOEH website: [http://uuhsc.utah.edu/rmcoeh/](http://uuhsc.utah.edu/rmcoeh/)
**RMCOEH News Corner**

**Dr. Leon Pahler, PhD, MPH, CAIH,** received the F. Marian Bishop Award, $24,900, to partially fund his project “Submicrometer Particulate Monitoring, a Surrogate for Diesel Particulate Matter (DPM) Monitoring in the Underground Mining Industry.” The concentration of diesel particulate matter (DPM), which may adversely impact a miner’s health, resulting from the exhaust of diesel powered equipment in underground mines is currently regulated by the Mine Safety and Health Administration (MSHA) and has an 8-hour time-weighted permissible exposure limit of 350 ug/m³ for total carbon, which is the current surrogate for DPM. The primary objective of this project is to determine if submicrometer particulates measured with real-time particulate measuring instruments can be used as a surrogate for current DPM monitoring methods. This project will use simultaneous sampling with both methods. Resulting sampling data will be statistically evaluated to determine if real-time particulate monitoring instruments can be used as surrogates for DPM monitoring. The most notable benefit of this research will be the capability to rapidly and accurately infer diesel emission concentrations to assure the optimum protection of a miner’s health. In addition, results may validate direct reading monitoring equipment for measurement of DPM concentrations on a real-time basis. Another potential benefit will be the reduced cost of DPM monitoring to the mining industry (and likely other industries).

**Dr. Scott Collingwood, faculty in Industrial Hygiene,** received funding for his project “Validation of a Real-time Monitor for Particulate Matter In-air Within Mines”. This project aims to build on current research directed by Dr. Leon Pahler in advancing the science regarding the measurement of diesel particulate matter (DPM) in mines. Current measurement methods are based on traditional gravimetric sampling techniques and require up to two weeks to obtain results. This research aims to validate the utility of a specific aerosol spectrometer in measuring DPM in underground mines. In particular, this research will examine the GRIMM 1109 Aerosol Spectrometer both with and without an environmental cabinet while sampling DPM laden air in an underground mine. The environmental cabinet adjusts the temperature and humidity of the sample air as these parameters can impact aerosol measurement. This information is valuable as mines struggle to implement interventions aimed at protecting worker health in light of a pending federal regulation that will reduce the current permissible exposure limit for DPM by more than 50% in 2008. The validation of a real-time instrument capable of measuring DPM will allow mine operators to get valuable exposure information immediately rather than waiting for laboratory results. Expected future outcomes are that real-time information could be paired with task based exposure assessment methodologies that may identify specific work tasks and conditions that result in increased DPM exposures. This will assist mine operators in focusing intervention on those conditions that lead to increased exposure to DPM. Support for this project was provided by RMCOEH Pilot Project Research Training grant within the RMCOEH’s NIOSH Grant through a peer reviewed competitive process.

**Dr. Scott Collingwood, faculty in Industrial Hygiene,** was awarded financial support through the Health Studies Fund (DFPM) for the project titled “Characterization of the ultra-fine particle emissions from office laser printers”. To date, limited studies have been conducted on the contribution of the common office laser printer to indoor air quality. Recent results of a study of office printers concluded particles generated by laser printers can significantly (p=0.01) affect the ultrafine particle pollution in office settings (He et al, Env Sci & Tech, Aug 2007) and further studies on printer emissions and their chemical characteristics are needed. The objective of this research is to characterize the ultra-fine particle emissions from a variety of office laser printers in an effort to relate exposures to their potential adverse health outcomes. A Public Health graduate student will assist Dr. Collingwood.

The Annual Utah Conference on Safety and Industrial Hygiene was held on October 11-12, 2007 in Salt Lake City, Utah. Over 290 safety and health professionals were in attendance. The conference is an annual event that is designed to provide a forum for the exchange of information and ideas related to occupational health and safety issues that affect the workplace, general environment, and community. This year’s conference keynote speakers included the Super Sherpas, who described their numerous Mt. Everest ascents, and Dr. Howard Leaman who addressed issues of sleep, fatigue and accidents. Concurrent safety and industrial hygiene sessions followed the general keynote sessions each day. These sessions focused on current safety, industrial hygiene and environmental issues as well as technical updates and information on more effective interaction in the workplace. Twenty-one commercial exhibitors also participated in this year’s conference.
the Continuing Education program successfully held its first training course conducted in Spanish. The course, "An Asbestos Worker Refresher", was held Saturday, November 3, 2007 and again January 26, 2008 at the RMCOEH. It is anticipated that this training will expand throughout the safety and health community in the future. The course is scheduled to be held two more times in 2008. Additional offerings in Spanish are under consideration.

**Board Certifications:** John Parker, MSPH and Nick Rice recently passed the American Board of Industrial Hygiene examination and now are Certified Industrial Hygienists (CIH). John graduated from the RMCOEH Industrial Hygiene Program in May 2007 and is currently employed by Kennecott Utah Copper in their Smelter operation. Nick is currently a part-time RMCOEH student and Industrial Hygienist with Intermountain Healthcare. Congratulations to John and Nick!

**Ergonomic & Safety:** We are pleased to announce that E&S student received his Certification, William Mechan, P.E., CSP, CPE.

**Occupational Medicine:** We are pleased to announce that two of our Occupational Medicine Graduates, Philip Jiricko, MD, MS, and Gary Caplan, MD, MPH, passed the Fall 2007 American Board of Preventive Medicine examination in the specialty area of Occupational Medicine. This addition brings the number of ABPM Diplomates in Occupational Medicine who have graduated from the RMCOEH to 48 since 1992.

**Professional Organizations:** RMCOEH alumnus, Dave Roskelly, MSPH, CIH, CSP was recently elected to the Board of the American Industrial Hygiene Association, Utah Local Section. This follows Dave’s years of service in the capacity of Treasurer for the Utah Local Section. Dr. Leon Pahler, RMCOEH Industrial Hygiene, was elected to the Utah Local Section’s President-Elect position for 2008. Similarly, following his election a year ago, Dr. Scott Collingwood, assumes the role of President of the Utah Local Section for 2008. Congratulations Dave, Leon and Scott on their volunteerism and service to their profession.