

The Rocky Mountain Center

Gateway to OSH

Volume 5, Issue 1

Occupational Safety and Health

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.

**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.].

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RMCOEH ADVISORY BOARD MEMBERS



David Richards, MD, FACS



Dr. Richards has been a practicing specialist in general surgery since 1975. He was born in Bingham, Utah and raised in Salt Lake County.

He received his Bachelor of Arts degree from the University of Utah, graduating *magna cum laude* and with Phi Kappa Phi and Phi Beta Kappa honors. In 1966 he completed medical school with Alpha Omega Alpha honors from Cornell University Medical College in New York City. He completed a general surgery internship at Denver General Hospital and a four year general surgery residency with the University of Utah Affiliated Hospitals. Dr. Richards is board certified in the specialty of General Surgery by the American Board of Surgery. Following his residency training he joined the Memorial Medical Clinic in 1975 where

he practiced until March 2004 when he closed his active office practice and limited his surgical activities to assisting in surgeries.

Dr. Richards is a founding member of the American Society of General Surgeons and a fellow of the American College of Surgeons as well as a member of the American Medical Association and the Utah Medical Association. He served as president of the Utah Medical Association 1985-86 and a member of the Board of Directors of the American Society of General Surgeons from 1992 to 1999. He has also served for over 12 years as alternate delegate and delegate to the House of Delegates of the American Medical Association.

Dr. Richards served as a non-commissioned officer of the US Army Reserve from 1960 to 1968 and as a medical officer from 1973 to 1988. In 1988 he transferred to the Utah Army National Guard where he served with the 144th EVAC Hospital (acting as Deputy Commander, Directorate of Clinical Care Services and Chief of Professional Services, and Chief of Surgical Services both in Utah and in Operation Desert Shield/Storm 1990-

1991) until the deactivation of the 144th in 1993. From 1995 to 1998 he was the Commander of the Medical/Dental Detachment, Utah State Area Command, Utah Army National Guard. He retired from military service in 2002.

In addition to his general surgery practice Dr. Richards served as Vice President and Medical Director of IHC Health Plans, Inc., Intermountain Health Care's health insurance subsidiary, from 1992 to 2002. During this time the membership of IHC Health Plans grew from 90,000 to 500,000 plus an additional 500,000 affiliated members. He continues to serve Intermountain's Select Health insurance company as its Medical Director over physician and practitioner credentialing.

Dr. Richards is the nephew of Paul S. Richards, and fondly recalls trailing his uncle on rounds that helped propel him to a medical career.

He is married to Karen (Bodell). They have three children, 10 grandchildren and a cat. Dr. Richards enjoys fishing, camping, movies, relaxing at home and is looking forward to being able to spend time traveling and visiting with (and spoiling) the grandkids.



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

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.



Dr. Howard Leaman

Legislative Update HB 009

Update SB 159

HB 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.

Donations to the RMCOEH through SB 159 are now easy to accomplish. On the TC-49 form, Insurance Premium Tax Return, line 2 is the item of Occupational health and safety credit. The instructions state that "Companies writing workers compensation insurance are entitled to a credit for donations to a qualified occupational health and safety center. The amount of the credit is the lesser of the total donation or 0.10 percent of the premium assessment on workers compensation."

This bill allows self-insured employers and workers' compensation insurance carriers to voluntarily contribute to the Rocky Mountain Center. It was proposed when state funding support was reduced. Funding provided by the bill will help our Center to continue critical programs.

WCF & Richards Foundation Scholarship Recipients

*I*n May, Workers Compensation Fund awarded nine RMCOEH graduate students the Dr. Paul S. Richards Safe Workplace Scholarship.

Recipients are selected on the basis of past academic performance, professional work or personal experience, financial need, as well as potential to complete the program and contribute to worker health and safety. Students receiving this scholarship are required to maintain at least a 3.0 GPA at all times in their selected field of study and are encouraged to complete an internship with the Workers Compensation Fund's Safety and Loss Prevention Department.

Those receiving this award are:

Ergonomics & Safety: Derrick Franklin, and Nathan Godfrey.

Industrial Hygiene: Andrea Colvin Thacker, R. John Taylor and Valoree Vernon.

Occupational & Environmental Medicine: Steven Angerbauer, Anne Donohue, Stephanie Sobczynski-Patton and Ruth Jessica Hanford.

Truckers Study Grant

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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.

Upcoming Continuing Education Classes and Events

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

For additional information on CE classes, please visit the continuing education section of the RMCOEH website: <http://uuhsc.utah.edu/rmcoeh/>

On-line Courses

S 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.

RMCOEH News Corner

*D*r. 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).



Leon Pahler, PhD, MPH,

*D*r. 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 informa-

tion 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.

*D*r. 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 emis-

sions 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.



Scott Collingwood

*T*he 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.



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More RMCOEH News

*T*he 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 anti-

ipated 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.

*B*oard 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 Mehan, 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 examina-

tion 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.