RMCOEH Director’s Message

Welcome to the 14th volume of the Rocky Mountain Center for Occupational and Environmental Health’s Newsletter. In this issue we highlight recent research and academic achievements, and acknowledge the meaningful contributions made by Dr. Rod Larson as he begins a new chapter entitled, Retirement (see page 2 for a feature on Dr. Larson). The Center faculty and staff know how important it is to celebrate our successes, however, we also know that it is equally important to recognize and call out those individuals and organizations behind the scenes that make our accomplishments possible--people like Jeff Burton. Jeff Burton has been involved with the RMCOEH almost since its inception and he currently teaches our ventilation courses. As a national and internationally recognized expert in ventilation, having an instructor of Jeff’s caliber is something of which faculty, staff, and especially the students can be proud: it isn’t every industrial hygiene program that can boast of a top tier course instructor. Jeff recently made a generous contribution to the Center through an IRA rollover, which has become a permanent way to make tax-friendly contributions to non-profit organizations like RMCOEH (see page 5 for an interview with Jeff). Jeff’s gift will help RMCOEH reach its goals. The entire faculty and staff of the Center would like to thank Jeff Burton for his generous and visionary support. As you read this issue of the RMCOEH Newsletter, I think you will see the myriad ways in which financial support makes the Center stronger: from faculty research to student awards, the financial contributions of our donors is the foundation on which our achievements are built. Thanks to Jeff and all those who support the Center. If you would like to join Jeff Burton in making a tax deductible, year-end contribution to the Center, please contact Rachel DeHart, Associate Director of Finance at 801.581.3532 or rachel.dehart@hsc.utah.edu.

Kurt T. Hegmann, MD, MPH
RMCOEH Director
Dr. Paul S. Richards Endowed Chair in Occupational Safety and Health

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Front Cover: Photo by Dr. Leon Pahler
Dr. Rod Larson Retires

Dr. Rod Larson of the Rocky Mountain Center announced his retirement this year. As of October 2016 Dr. Larson is fully retired and switching his focus from teaching and conducting research to spending time with his wife (Janice), children (Chris and Julie), and grandchildren. Although Dr. Larson will be missed, the faculty and staff are happy for him as he begins this exciting new phase.

For over 11 years (2004-2016) Dr. Larson was Director of the Industrial Hygiene program at the Rocky Mountain Center. He was a driving force behind the development of the Master’s of Science in Occupational Health degree (MSOH) and assisted in the passing of SB-159 in 2007, the statute that ensures the Center is operational. In addition to teaching, mentoring, and researching, Dr. Larson was a key investigator in the National Children’s Study (NCS) where he led the environmental team’s scientific plan to evaluate the effectiveness of passive dosimeters for collections of airborne contaminants at different elevations and with various air velocities. The NCS was only one of several grants that Dr. Larson helped secure while at the Center.

Not content with his numerous teaching responsibilities, Dr. Larson also authored numerous research articles for journals such as the Journal of Occupational and Environmental Hygiene. Dr. Larson was a member of several professional committees and was interviewed by local media on several occasions on topics ranging from endometriosis and environmental exposures to household molds and potential health concerns to ventilation cleaning scams.

Prior to coming to the Center, Dr. Larson worked for Exxon Mobil as an IH program director (1987-1991) and from 1996-2004 he ran his own consulting company, Larson International. Other career highlights include:

* 1986 American Board Industrial Hygiene certification
* 1997 National Cancer Institute Cancer Prevention fellowship award
* 2002 National Institute of Occupational Safety and Health (NIOSH) visiting lecturer
* 2008, Fellow, American Industrial Hygiene Association
* 2010 Acting member of the Utah Department of Environmental Quality asbestos review committee
* 2016 RMCOEH Award of Excellence in Workplace Safety and Health, awarded by the RMCOEH Advisory Board

As Dr. Larson prepares to make his way down to the beauty and warmth of Texas, the faculty and staff at the Rocky Mountain Center wish him well and express their appreciation for his hard work and contributions to the Center and the field of occupational health and safety.
Researcher Spotlight: Dr. Leon F. Pahler

Dr. Leon F. Pahler is one of three full-time industrial hygiene faculty at the Rocky Mountain Center. Recently, much of his research has focused on worker heat stress in hot work environments. Heat stress is a common reason cited for emergency room visits, the U.S. military considers exertional heat illness a primary concern when conducting drills and operations, and from 2012-2013 the Centers for Disease Control and Prevention reviewed 13 cases involving fatalities attributed to heat stress. These are just a few examples of heat stress as a problematic health outcome.

The difficulties in monitoring heat stress are numerous and the best methods are done via physiological models that provide individual real-time estimates of heat stress; however, such methods traditionally employ a rectal thermometer, which is (slightly) intrusive and expensive. In addition, heat strain is highly individual and can be influenced by a number of factors including age, acclimation, lifestyle, health status, medications, and genetics. Clearly, new methods capable of determining an individual’s heat stress level are needed in order to ensure workers do not fall victim to heat cramps, heat exhaustion, or even heat stroke. To solve the problem of heat stress, Dr. Pahler examines measures of core temperature with thermal imaging. Dr. Pahler is proud to work with local and national industry partners in researching more effective means of evaluating heat stress and the results of his most recent study can be read at: Holm, C; Pahler, L; These, MS; and Handy R. Evaluation of physiological stress in hot work areas using thermal imagery. *Journal of Thermal Biology*, 2016;61:8-15.

Dr. Pahler’s other research has focused on the dissolution of mine ores and elements in synthetic lung fluids and the correlation of real-time aerosol instrument measurement of particulates with standard sampling and analytical methods for diesel particulate matter, hexavalent chromium in welding fume, and silica. When research involves students, Dr. Pahler’s research goals are multifaceted: educating students in study design and implementation, data analysis and evaluation, and meeting technical writing requirements for publication. Dr. Pahler is currently working on three articles, one of which focuses on heat stress, another that examines air quality in post-operative care units, and another that investigates the comparability of data from two air-sampling instruments.

Events and Happenings

From May 21-26 the IH faculty and select students attended the American Industrial Hygiene Conference & Exposition (AIHce) in Baltimore, MD. Justin Stewart, MSOH won a best student poster award (see page 10) and Joemy Ramsay, PhD won 1 of 5 AIHA Marketplace Consolation Prizes. This international conference offers educational and networking opportunities. The Rocky Mountain Center faculty and students frequently make presentations and students run a University of Utah booth (far left picture).
Scholarship Awards

The faculty and staff of the Rocky Mountain Center would like to congratulate the 2016-2017 Dr. Paul S. Richards Safe Workplace Scholarship recipients:

In Ergonomics and Safety:
Nicolas Brown
Kelton Gubler
Melydna Schreiber
Dorothy Taylor

In Industrial Hygiene:
Scott Clingenpeel
Clint Holm

In Occupational Injury Prevention:
Onwuka Okorie
Andria Thatcher

In Occupational Medicine:
German Ellsworth
Andrew Phillips
Charles Prezzia
Sarang Yoon

Each year, due to the generosity of the Workers Compensation Fund, students at the Rocky Mountain Center have the opportunity to submit a competitive application for the Dr. Paul S. Richards Safe Workplace Scholarship to help offset the cost of tuition, fees and full-time academic expenses. To be eligible, students must have an undergraduate GPA of 3.0 or better, meet all RMCOEH admission requirements, and demonstrate the potential to excel in graduate-level coursework in addition to meeting other selection criteria. Thanks goes to Workers Compensation Fund for administering the scholarships and partnering with the RMCOEH in shaping the future of occupational health and safety.

Certified Industrial Hygienist (CIH)

Justin Day, a former graduate of the Rocky Mountain Center’s IH program, recently became a Certified Industrial Hygienist (CIH). In order become a CIH, applicants must pass an American Board of Industrial Hygiene (ABIH) exam that tests their knowledge area, skills, and training. The Center encourages all of its graduates to obtain CIH certification within 3-5 post-graduation, as this achievement is a widely recognized marker of an IH’s proficiency.

As I was taking the exam, I was able to see that the IH program at the RMCOEH was a great preparation for the CIH exam and my career.
--Justin Day

Please join us in congratulating Justin on this important career achievement.

RMCOEH Alumni Spotlight:
Andy Migel

I currently work for Juneau, AK as the Safety Officer for the city’s department of Human Resources and Risk Management. Juneau is a great place to visit and to live and I am lucky to work with great people and a great community. I work alongside the risk management officer and wellness coordinator to manage the safety programs for about 2,000 employees.

I’ve spent the better part of my time establishing a safety management system, which has been challenging and rewarding. In serving the people of the capital city of Alaska, I’ve come to understand an array of systems that I used to take for granted. While I’ve learned about the networks of computers, roads, water lines and processes that serve me, I’ve been able to serve those who work and live in Juneau by championing safety. I’ve spent my time visiting work sites to review procedures, to perform hazard analyses, to conduct facility inspections, to train, and even to do some industrial hygiene. (Continued on page 10.)
Tell us about yourself (background, education, career, etc.).
I graduated from the University of Utah in mechanical engineering (ME) in 1967 and went directly to Cincinnati, Ohio to join the United States Public Health Service’s (USPHS) national industrial hygiene (IH) program. Jeff Lee—one of the future founders of the RMCOEH—and I were fraternity brothers and he joined the same IH program. We attended a 12-week intensive program intended to turn us into industrial hygienists (IHs) and then serve in the USPHS. In 1970, I graduated from the University of Michigan with an MS in Occupational and Environmental Health (OEH), returned to Salt Lake with the USPHS and then became a (mostly) ventilation consultant in 1974. Over the years I have been involved in hundreds of ventilation projects in smelters, factories, shops, research labs, nuclear facilities, office buildings, schools, etc. I also earned the standard credentials (PE, CIH, CSP) and was heavily involved with the national American Industrial Hygiene Association (AIHA) before becoming AIHA President in 1997.

How did you become engaged with the Center?
Jeff Lee helped establish the RMCOEH and Education Research Center (ERC) in 1976-78 and I was peripherally involved, e.g., we worked together in creating the first IH Comprehensive Review course while I was an Adjunct Instructor in the Department of Mechanical Engineering (ME). That course has evolved and been foundational for Connie Crandall’s Continuing Education (CE) group ever since, with me teaching ventilation and hazards controls, among other occasional topics.

During the 1970s and 1980s I was teaching a ventilation course at the ME department and all the IH students took the course. About 1985, Jeff Lee asked me to take over the ergo/safety program full time for one year until we found Don Bloswick. (I was “one hour ahead of the students.”) About 2004 Rod Larson asked me to come on again for a year, at 50% of my time, while he found new faculty and established his educational programs. I have been teaching the ventilation course ever since.

Why did you choose the Rocky Mountain Center for your donation?
I have an abiding interest in seeing more engineers enter the IH field. Engineers were 25% of the field when I joined. Now it is only 5%. The American Board of Industrial Hygiene (ABIH) has defined three main knowledge domains for the field IH. One is exposure control: An IH must be able to control exposure hazards associated with airborne chemicals, noise, heat stress, poor air quality, etc. The traditional IH hierarchy of controls begins with “engineering controls.” So the field must both recruit engineers and train non-engineer IHs to be familiar with engineering controls. So my donation is intended to support these goals.

What would you say to others who are considering making a contribution?
There is great satisfaction in knowing that we are helping prepare graduates and practicing professionals to cost-effectively protect the health and safety of employees and building occupants. We’re saving lives and making them better!

What do you see for the future of the Center?
Given the current outstanding leadership, faculty, staff and ongoing programs, I see nothing but a glowing and successful future here at the RMCOEH.
An IRA gift may be of interest if...

√ You wish to reduce your taxable income. Gifts are eligible for the Required Minimum Distribution (RMD), which can lower taxable income.

√ You want to give more than your normal amount this year. An IRA rollover does not count towards the 50% annual limit on charitable gifts.

√ You are looking to avoid the Alternative Minimum Tax (AMT) or incurring Affordable Care Act (ACA) tax.

√ You do not need all or a portion of your IRA income.

Support the RMCOEH...

√ If you wish to make a tax-deductible gift to a non-profit organization.

√ If you want to support the future of occupational health and safety. RMCOEH educates future industrial hygienists and occupational medicine physicians.

√ If you believe in education and the value of knowledgeable well-educated professionals.

√ If you do not need all or a portion of your IRA income.

Support the RMCOEH with...

√ A check or cash donation.

√ Through payroll deduct if you are a University of Utah employee.

√ With any major credit card.

√ By including a planned gift as part of your estate.

To make a gift in support of one or all of the RMCOEH educational programs, please contact Rachel DeHart, Associate Director of Finance at 801.581.3532 or rachel.dehart@hsc.utah.edu for more information.
On October 12-14, 2016, the 33rd Annual Utah Conference on Safety and Industrial Hygiene was held in Salt Lake City, Utah. Co-sponsored by the Rocky Mountain Center for Occupational and Environmental Health, the Utah Local Section of the American Industrial Hygiene Association, the Utah Local Chapter of the American Society of Safety Engineers, and the Utah Safety Council, the conference celebrated its 33rd year as a forum for the exchange of information and ideas related to occupational and environmental health and safety issues that affect the workplace, general environment, and community. Twenty concurrent safety and industrial hygiene sessions focused on current safety, industrial hygiene, and environmental issues as well as technical updates and information on more effective interaction in the workplace. One-day of selected short courses preceded the two-day general and concurrent session conference. In addition, 32 vendors participated in the exhibition hall, providing products and demonstrations related to occupational safety and health.

Of particular note is that the attendance for this conference was at its highest ever this year with 337 attendees!

The Rocky Mountain Center would like to thank its local partners for making this annual conference a continued success and here’s to the next 33 years.
January Courses:
- OSHA 510, 502, 500 Occupational Safety and Health Standards for the Construction Industry
- 28th Compensable Disability Forum Update 2017
- Asbestos: Project Designer Refresher and Contractor/Supervisor

February Courses:
- OSHA 503, 511, 501 Occupational Safety and Health Standards for General Industry
- NIOSH Approved Spirometry Training
- CAOHC-Approved Hearing Conservation Training
- Lead Inspector Training
- Indoor Mold

March Courses:
- OSHA 2055 Cranes in Construction
- 40-hour Hazardous Waste Site Worker Course
- Prevention and Response to Homemade
- OSHA 2264 Permit-Required Confined Space Entry – St. George
- OSHA 510, 500, 502 Occupational Safety and Health Standards for Construction Industry

April Courses:
- Respiratory Protection and Fit Testing
- OSHA 2045 Machine and Machine Guarding Standards
- 14th Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium
- OSHA 503, 511, 501 Occupational Safety and Health Standards for General Industry

May Courses:
- Lead Renovation, Repair and Painting
- OSHA 6000: Collateral Duty Course for Other Federal Agencies
- OSHA 3115 Fall Protection
- OSHA 501, 510, 500 Occupational Safety and Health Standards for the Construction Industry

June Courses:
- Asbestos Inspector Training
- OSHA 2225 Respiratory Protection (Helena, MT)
- DOT Hazardous Material Transportation Training
- OSHA 501, 511, Occupational Safety and Health Standards for General Industry
- 8-Hour Hazardous Waste Refresher

For additional information on Continuing Education classes, including distant learning courses, please visit the Continuing Education section of the RMCOEH website at: http://medicine.utah.edu/rmcoeh/continuing-education/
On April 28th, 2016, Dr. Jeremy Biggs became Medical Director of the University of Utah’s RedMed Clinic. The clinic was opened to treat the 20,000 employees working on the University of Utah’s main campus and to serve as a first-line evaluation in work-related injuries. In addition, employees can come to the clinic for routine vaccinations, upper respiratory infections, rashes, general aches and pains, and other non-emergency health complaints.

The vision of Joan Gines, Associate Vice President of Human Resources, the RedMed Clinic is intended to keep employees healthy and to ensure that “the University of Utah [is] one of the best places to learn and work” (University of Utah Health Care). Located on the main floor of the Union Building, employees can utilize the clinic’s services without needing to make a co-pay and walk-ins are as welcome as scheduled appointments.

RedMed is staffed by a nurse practitioner and one medical assistant (MA) Monday-Thursday from 8:00AM-5:00PM and from 9:00AM-3:30PM on Fridays. Dr. Biggs is available for consulting on cases and overseeing the development of policy and staff training.

The clinic represents an interdepartmental effort with funding provided by University of Utah Human Resources, nurses and MAs provided by the College of Nursing, occupational medical expertise provided by Dr. Jeremy Biggs of the RMCOEH, and overall management provided by University of Utah Employee Health Director Brooke Gardner.

RedMed is currently seeking to partner with other University of Utah departments interested in occupational health surveillance. For more information, or to become a RedMed partner, contact Dr. Biggs at: 801.581.4800 or jeremy.biggs@hsc.utah.edu.

The Rocky Mountain Center’s Master of Science in Occupational Health-Industrial Hygiene (MSOH-IH) program recently prepared materials and interviews for its Applied Science Accreditation Commission-Accreditation Board for Engineering and Technology (ASAC-ABET) program review. In order to renew ASAC-ABET accreditation, the IH faculty needed to demonstrate competencies in establishing and achieving educational goals including student outcomes, ongoing internal assessments of goals and objectives, and also show that a master plan for continuous program improvement was in place. Dr. Richard Coe (Team Chair) from ABET conducted on-site visits at the Center from November 6-8.
Awards and Accolades

Best Poster

Congratulations goes to Justin Stewart, 2015 MSOH graduate, for winning the American Industrial Hygiene Association (AIHA) Aerosol Technology Committee Best Student Poster Award. Not only did Justin win an award for the poster, but it was also featured in his research article entitled, “Assessment of Increased Sampling Pump Flow Rates in a Disposable, Inhalable Aerosol Sampler.” The article was published in the peer-reviewed Journal of Occupational and Environmental Hygiene in August. Justin’s accomplishments exemplify the high-level of activity expected of our graduates and we are proud of his success.

Rising Star

Andy Migel, a 2010 graduate from the RMCOEH’s IH program, was awarded the Rising Star in Safety award by the National Safety Council (NSC) for the work he does with the city of Juneau, AK. Rising Star awardees must “have a proven track record of safety leadership and promoting continuous safety improvement” (NSC). A big congratulations and thank you to Andy for making the northern most corner of the U.S. a safer and healthier work environment. Way to go Andy!

Right: Andy receives his award from the Juneau City Council.

Award of Excellence

The Rocky Mountain Center’s Advisory Board awarded the 2016 Award of Excellence in Workplace Safety and Health to Dr. Rod Larson, PhD, CIH at the 33rd Annual Conference on Safety and Industrial Hygiene. Each year the award is given to one individual who has made exceptional contributions toward improving the health and safety of all Utah workers. This year the Center felt it appropriate to recognize the work of Dr. Larson, which spans a career of over 35 years and includes managing an IH program for a major petro-chemical company and developing the Center’s Master’s of Science in Occupational Health (MSOH) degree program as well as helping develop the PhD in Occupational and Environmental Health program.

Above: Terracon’s Don Marano presents Dr. Larsen with the 2016 Award of Excellence.

RMCOEH Alumni Spotlight: Andy Migel

Continued from page 4

I was recently recognized by the National Safety Council as one of 40 rising stars in safety (see the Rising Star feature to the left). My manager nominated me for this award and wrote a short script about some things I have been working to achieve. If you’d like to, you can read more in the October 2016 edition of the Safety + Health magazine (I’m one of the faces on the cover).
STOP!

Did you receive a hardcopy of the RMCOEH Newsletter, but would like an electronic copy instead? Email Toni Chambers at toni.chambers@hsc.utah.edu to make the switch!