President’s Message
Barb O’Kane

Greetings RMS Members from Salt Lake City,

As I write this article the sun is coming up over the Wasatch Mountains shedding the day’s new light on the Oquirrh Mountains. At the same time, the proverbial sun is setting on my 2015 AIHce conference, with me and my bike heading back east up over those Wasatch Mountains (thanks for the lift, Cym). Like all national conferences, this one was educational, enlightening and exhausting and there wasn’t enough time to do it all. However, there were some special take-aways. The opening session speaker was Alison Levine, Team Captain of the first American Women’s Everest Expedition. Her leadership talk contained six key messages, one of which was the importance of building relationships – because the people you take time to get to know will help you (in her case, to get off Everest alive if she needed help) and you will be more apt to help them. Networking is one of the greatest rewards of the conference – and I hope everyone who attended made a few new (possibly life long) connections this year and were able to link up with colleagues not seen for years.

Chris Lorenzo, who’s AIHA-National presidency culminates this week, knocked it out of the park on the opening day (and the entire conference), making us RMS’ers proud that we know our AIHA president personally. Great conference Chris and thanks for your leadership over the past year! RMS had a strong showing, as attested by our “Ambassador” status - having the most attendees from a single local section. The accomplishment of having the most local section attendees has won our section a Free 2016 eLearning subscription from AIHA, oh yeah!
And speaking of running, our very own Roberta Smith (webmaster) won first place in the overall women’s division of this year’s fun run. Lisa Grossbach and I won in our age groups. Of course, we did have a tiny altitude advantage....

MAP-ERC/RMS Social at the AIHce

Thanks to those of you who came to this year’s MAP-ERC and RMS social, we had 60 Colorado folks at the Beerhive Pub - a great venue to reconnect and meet new folks including a large percentage of the Colorado State student section. Thanks Michelle Haan, Jana Gurkin, Amanda Van Dyke and Steve Reynolds for organizing the gathering!

There’s so much more I could say about this year’s conference, but like me, I need to turn this article back towards our local chapter....

“If you do what you’ve always done, you’ll get what you’ve always gotten”. Who officially said this first is up for debate, but I will always link it to my boss at Kodak, Dave Andre. Dave was a baseball coach for years and I think he used this line on his players as well as his staff. Though I haven’t worked with Dave for going on 10 years, those words are ringing out as if Dave were sitting here beside me. This quote is in my head because I think every RMS Board and committee member must have gotten the same message sometime in their life. Based on this year’s goals and achievements to date, it’s apparent that the RMS Board Directors are looking for new ways to approach their committee – taking on new challenges and stretching for grand goals. And know that the Board Directors are able to reach for new heights because of the strong foundation set in place by all the previous RMS committee members (as another saying goes, “standing on the shoulders of giants”).
Please take time to read the rest of this newsletter to get the details on current events of the RMS. Also, know that at anytime you can get involved and offer up your time and talent and give back to RMS. Simply go to our homepage and click onto the Board Members webpage – there you can contact a committee director to get more information.

Some of the exciting new happenings include:

**Education Committee** (Holli Merchant, Director) – Ever wonder what happens to your samples when you submit them to the Lab? If so, join us for a half-day laboratory basics class on June 25th. Want to learn the in’s and outs of that 4-gas meter you have sitting on your desk? Bring your meter and get some hands on training July 15th. See the events page to sign up for these valuable yet value-priced education events. New for this year, RMS will be offering a “3rd Day” to the traditional 2-day Fall Tech Conference, with a full-day professional development course on machine safeguarding. Keep an eye on your email for details on that class.

**Outreach Committee** (Sarah Kaiman, Director) has set their sites on raising awareness about the IH profession by visiting high schools and middle schools. See Sarah’s article about the Committee’s experience at a Fort Collins science fair in April. Additionally, Outreach is going to be setting up a method to connect mentors with mentees. Keep an eye out for further information and how to get involved with this new program.

**International Committee** (Bevin Luna, Director) has re-formalized an agreement - initiated with RMS in 2002 - with TUIASI University in Romania. Using this agreement as a model, the International committee has goals to set up similar connections in Latin America. The committee members will arrange and deliver web-based education events and is establishing a new affiliate RMS membership status for our international colleagues.

**Newsletter Committee** (Bree Beck, Director) has capitalized on the potential of e-newsletters and given this newsletter a new look. The committee is also looking to expand the advertisement.

**Web Manager** (Roberta Smith) is now a committee thanks to new volunteers. They keep our events current on the website and have set up Facebook and LinkedIn accounts, so like us and connect!

**Programs Committee** (Linda Hendrix, Director) continues to offer technical tours, lunch and breakfast sessions and joint meetings with ASSE throughout the year.

**Legislative Committee** (Erik Vermulen, Director) continues to track and report on issues related to health and safety within Colorado and Wyoming.

**Fall Technical Conference Planning Committee** (President Elect, Bradley King) is well on their way to offering another exceptional 2-day conference (with the optional 3rd day of machine safeguarding). Please be sure to see his newsletter article and save the conference dates.

**Membership** (Alyce Bizzell) has an update in this newsletter on the number of RMS members. Finally, I want to thank our Treasurer (Megan Meagher) and our Secretary (Debbie Crider) for working on the details and keeping us on track.

Alison Levine used the term “team ego” which aptly describes the way I feel about this RMS Board - “I am proud to be a part of something bigger than myself”. Way to go team!

Best wishes for a terrific summer!

Barb

Barb O’Kane, CIH, CSP, CLSO

President AIHA-Rocky Mountain Section
For the first time, AIHA-RMS participated in the Special Award program at the Colorado Science and Engineering Fair (CSEF), which was held at Colorado State University on April 9th. Members of the AIHA-RMS section spent the afternoon evaluating hundreds of outstanding junior-high and senior-high level science fair projects to identify the one that they felt best related to the improvement of worker and/or community health and safety for a $100 award. It was no easy task! The judges were truly humbled by the quality of the exhibits. At the end of the day, the AIHA-RMS judges (Bevin Luna, Kelly Sandin, Don Archibald, and Sarah Kaiman) decided that they would present the $100 award to a senior-level student and a Certificate of Achievement to a truly outstanding junior-level student. The judges all had a great time at the CSEF and hope that AIHA-RMS participation becomes a tradition!

The $100 award went to Hari Sowrirajan for his project, “Nanoparticle-Induced Macrophage Atherogenesis”. The judges felt that the research Mr. Sowrirajan conducted may help us to better understand potential health impacts of nanoparticles in the body, which is very important for occupational health and safety professionals who work to protect workers from exposures to potentially harmful substances in the workplace. The Certificate of Achievement went to Sam Duarte, for his project “Bagpipes and Earplugs: Should Great Highland Bagpipe Players Use Earplugs When Practicing?” The judges felt that the research from this project could help bring greater awareness to hearing loss hazards and increase the use of hearing protection in the music industry.

Membership Committee

Alyce Bizzell

The AIHA RMS Membership drive was a total success!! We have 267 members!! Thanks to everyone for their continued support of the best professional organization in the State of Colorado!
Fall Technical Conference Committee

Bradley King

September will be here before you know it and so will another edition of the Fall Technical Conference (FTC)! The planning committee for the 2015 FTC is composed of volunteer members from the Rocky Mountain Section of AIHA as well as the Colorado Chapter of the American Society of Safety Engineers (ASSE). We’ve been hard at work the past several months beginning the preparations for the conference and we are looking forward to making it the best conference for our members yet.

The conference will be held on September 16-17, 2015, at the Arvada Center, located at 6901 Wadsworth Blvd, Arvada, Colorado. The two-day technical conference will bring together a number of experts to present on a wide variety of occupational health and safety issues. Highlights of the upcoming conference include planned sessions on transportation safety technologies as well as healthcare worker health and safety issues in regards to the Ebola concerns over the past year.

The opportunity to be part of the conference is still available! We are actively accepting abstracts from our members who would like to present their technical work. We’d love to hear from you! Submission deadline is June 30, 2015. If you would like to submit an abstract for consideration, please follow this link: https://aiharmls.memberclicks.net/index.php?option=com_mc&view=mc&mcid=form_195063.

Announcements for registering for the conference will be forthcoming—we’ll be sending notices out to ensure everyone has time to plan to attend. Early bird pricing will be available for those registering early.

The theme of this year’s FTC is Connect, Exchange, Grow. We chose this theme because the FTC is a great way to connect with our professional contacts in the local area; to exchange new and interesting information on occupational health and safety issues; and to grow as an individual and as an industrial hygiene community. See you there in September!

CONNECT, EXCHANGE, GROW

Education Committee

Holli Merchant

June 25, 2015 we will be hosting Laboratory Basics for Industrial Hygiene Professionals at Hellman & Associates. This half day class focuses on everything the IH professional needs to know about laboratories in order to make informed decisions during IH sampling. The speaker for this class, Rob Strode, is a prominent Certified Industrial Hygienist from a well known laboratory. There’s still time to enroll! Just click HERE.

Also, On July 15, 2015 AIHA RMS will be featuring John Snawder from NIOSH to teach a Multi-Gas Detector Class. This will be an all day hands on course; everyone is encouraged to bring their own gas detectors. For more information and to sign up visit the website.
Greetings everyone! The International Committee has a number of activities that have taken place over the last couple of months. Most recently, an AIHA-RMS International Committee member, Linn Havelick, attended the IS-SSM Conference in Iasi, Romania. This is the second of this biannual health and safety conference held at the Gheorghi Asachi Technical University. The conference had an attendance of over 100 people, and the introduction included recorded videos of Joshua Schaeffer and Bevin Luna wishing the conference a successful conclusion. Linn Havelick provided the first technical paper which discussed the recent legalization of marijuana in the USA and its impact on health, safety and social matters. The talk was well received and approximately 20 additional technical papers were presented. The conference was considered to be a great success in Iasi.

In other activities, the International Committee established goals for the next year and those were presented to the AIHA-RMS Board of Directors during our April meeting. Those included the following: Goal 1 – Formalize the partnership agreement between Gheorghi Asachi Technical University (TUIASI) in Iasi, Romania (pronounced “Yash”) and the Rocky Mountain Local Section. Late in May 2015, the Rocky Mountain Section Board of Directors reviewed and approved the partnership agreement and secured a signature from the section President, Barb O’Kane; Goal 2 - Include the development of the first AIHA-RMS International Affiliate Membership with TUIASI on the AIHA-RMS 2015 Action Plan. The details for this plan are currently under review by the Board; Goal 3 - Operate within our current budget without requesting funding from the operational budget by generating income independently. The committee is currently planning a fundraising event for late August or early September. How does this benefit AIHA-RMS local section members? At sponsored events, local members will have the opportunity to volunteer for International Committee events by presenting or attending educational training and professional development events. As representatives of AIHA-RMS, local members will have the opportunity to participate in outreach activities to develop relationships on an international level in efforts to recruit individuals interested in the field of occupational health & safety. Finally, by volunteering for these events, local members will promote awareness and contribute to the preservation of occupational health and safety on an international level. If you are interested in learning more about the International Committee activities, please feel free to contact Bevin Luna at bev-in.luna@gmail.com. Have a lovely summer!!

LANDMARK ENVIRONMENTAL WELCOMES AIHA-RMS MEMBER, JAMES LIEBERMAN, CIH, TO THEIR TEAM

Landmark Environmental is pleased to announce that James Lieberman, CIH has joined their team as a Senior Consultant. Jim is a nationally known EH&S Professional with expertise in complex chemical risk management, process safety and industrial hygiene practices for the pharmaceutical, manufacturing, chemical and petrochemical industries. Jim has served as a testifying expert in a number of nuisance and chemical exposure cases. Jim can be reached at (720) 360-1503 or jlieberman@landmarkenviro.com

Landmark has been providing high-value environmental, industrial hygiene, and regulatory compliance consulting services for the Power Generation and Transmission, Oil & Gas, Government, Real Estate and Redevelopment industries since our inception in 1999.

7881 Shaffer Pkwy., Littleton, CO 80127 | 720.283.8974 www.landmarkenvironmental.com
Making Reclamation Powerplants a Quieter Place

Reducing noise in Reclamation’s powerplants by implementing advance engineering controls

Problem

Noise is often overlooked as a hazard at powerplants—and everywhere else—because there are no obvious indicators of acute or chronic exposure. Yet repeated exposure to loud noises can cause hearing loss or other noise-related problems, thus significantly affecting a worker’s quality of life. Exposure to high noise levels over the course of a workday can also result in worker fatigue and decreased performance and increase the risk of safety incidents.

Solution

This Reclamation Science and Technology Program research project researched and developed a pilot program in three Pacific Northwest (PN) Region powerplants. Reclamation has partnered with the Office of Naval Research (ONR) and their contractor Noise Control Engineering, LLC (NCE) of Billerica, Massachusetts, on this research project. NCE has been involved with ONR for a number of years, working on a major program to reduce hearing loss and other damages for troops on warships.

Application and Results

Reclamation put the noise-induced hearing loss program’s technology to use in the following Reclamation powerplants by determining noise levels with advanced measurement techniques and designing appropriate, cost-effective engineering controls: Green Springs Powerplant in southern Oregon, Roza Hydro Electric Powerplant in the Yakima Valley in eastern Washington, and Chandler Hydro Electric Powerplant, southeast of Prosser, Washington.

Bottom Line

Long-term exposure to high noise levels can cause noise-induced hearing loss, worker fatigue, and other problems, thus increasing safety risks. Reducing noise levels through the use of engineering controls significantly mitigates those risk factors.
### Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise levels before controls were installed (dBA)</th>
<th>Noise levels after controls were installed (dBA)</th>
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<tbody>
<tr>
<td>Turbine pit</td>
<td>101.4 (a jack hammer at 32 feet)</td>
<td>98.7 (a circular handsaw at 3 feet)</td>
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<tr>
<td>Penstock area</td>
<td>90.3 (an angle grinder outside at 3 feet)</td>
<td>74.5 (a passing car at 25 feet)</td>
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<tr>
<td>Control room</td>
<td>80.6 (very loud traffic noise at 25 feet)</td>
<td>70.6 (close to a main road by day)</td>
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<tr>
<td>Cooling water</td>
<td>86.6 (2-stroke chainsaw at 2 feet)</td>
<td>78.4 (un-silenced wood shredder at 2 feet)</td>
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Each powerplant is a little different, and thus it is important to tailor the type of controls to the type of noise sources. At the Roza Hydro Electric Powerplant, two large cooling fans that blew air directly through openings in one of the walls were found to be a major source of high noise levels. This was verified through the use of an advanced measurement technology called an acoustic array, which takes a three-dimensional picture of a room and then overlays the sound sources on top of the picture to verify the source of the noise. To reduce the noise from these cooling fans, silencers were designed and installed. The figure below shows the acoustic array results before and after the installation. Note the acoustic “hot spot” in the top figure that disappears after the installation. Sound absorption panels and a special spray-on material on the cooling ducts were also installed, which reduces the vibration of the ducts and keeps energy from this vibration from radiating as noise into the powerplant. Noise levels were reduced by 5 to 7 dB, and now all areas on this level fall below the 85 dBA target.

Installing controls at the Chandle Hydro Electric Powerplant also reduced noise levels by 3 to 5 dBA, to get below the target 85 dBA. Because much of the noise was due to a direct path of energy from generator cooling slots, in addition to damping material on the ducts and absorption panels on the walls, it was necessary to install sound absorption barriers that block this direct path.

**Future Plans**

Because of the success of this pilot program, a number of other plants are being targeted for installation of these noise reduction engineering controls. Measurements have already been taken at seven other Reclamation powerplants and appropriate engineering controls, where necessary, are being considered for installation. This new research helps Reclamation take the steps necessary to assure that noise does not harm its workers.
Hazards in Healthcare

This past May Linda Hendrix, Director of the Programs Committee, put together a breakfast session on Hazards in Healthcare. During this presentation Cynthia Ellwood and Roberta Smith shared their expertise on the hazards healthcare workers face everyday and the challenges safety professionals must overcome to help them. The presentation focused on the gaps present in the industry that need to be filled in order for the healthcare industry to catch up with other industries in terms of health and safety.

Cynthia and Roberta gave us specific examples that highlighted the gaps and they also spoke to the measures that were taken to evaluate exposures and to reduce those exposures. Overall the session was very informative on the healthcare industry but it was also a good reminder of the precautionary principle for all industrial hygienists. OELs are not always present or sufficient but it is still up to us to find ways to protect workers.

Be sure to check the calendar so you don’t miss other great sessions like this one!

Calendar

- **Board of Directors Meetings:**
  Everyone is welcome! Meetings are held the second Wednesday of every month (except June and July) from 5 to 6:30 pm. Meetings will be held on the Colorado School of Mines Campus in the EHS Department Offices at 1318 Maple Street in Golden, Colorado. Hope to see you there!

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<tr>
<th>Month</th>
<th>Meeting Date/Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>August</td>
<td>8/12/2015; 5:00—</td>
<td>CSM 1318 Maple Street, Golden, CO</td>
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<tr>
<td>September</td>
<td>9/9/2015; 5:00—6:30PM</td>
<td>CSM 1318 Maple Street, Golden, CO</td>
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<td>October</td>
<td>10/14/2015; 5:00—</td>
<td>CSM 1318 Maple Street, Golden, CO</td>
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<td>November</td>
<td>11/11/2015; 5:00—</td>
<td>CSM 1318 Maple Street, Golden, CO</td>
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- **June 25**—Laboratory Basics for the Industrial Hygienist
  [CLICK HERE](#) to register.

- **July 15**—Multi Gas Meter PDC—8 hour class
  [CLICK HERE](#) to register.

- **September 16-17**—21st Annual Fall Technical Conference
  [CLICK HERE](#) for more information.