



Cascade Chapter



Avalanche

The official newsletter of the
Cascade Chapter of the Health Physics Society

Fall 2009 Issue

<http://www.hpschapters.org/cascade/>

President's Corner

by Howard Wallace

Welcome! I hope you've all been enjoying your summers as much as I have. This is my first President's Corner, and a good time to reflect on the purposes of having a local chapter of a national organization like the Health Physics Society.

Former Speaker of the U.S. House of Representatives, Tip O'Neil, often used the phrase "All politics is local." According to Tip, this was something his father passed along to him after his first political loss, in a race for city council. In that race, Tip did much better in neighborhoods far removed from where he lived than he did in his own. He thought a lot about his father's words, ended up taking them to heart, and started on a long and successful political career. He never lost another political race.

It is often the simple, the mundane, the close by, the everyday concerns that occupy our time and influence our decisions. It is in our own communities where we are already poised to have the most influence. Yet sometimes we are tempted to focus our attention on issues and relationships far from home.

The Cascade Chapter gives us a chance to address issues close to home. We can engage in dialogues with local health physics professionals from government, academia, and industry. We can raise and pursue issues and projects that have the potential to directly affect the safety of our communities. And we can reach out and touch other local organizations and engage them in the dialogues.

Your Executive Committee has been working hard to make this local interaction not only productive but also fun. If you find yourself awake at nights wondering about things like:

- What type of radiation shielding should I use at an earth-moon Lagrangian point, and where should I put it?
- Was the unusual flight profile of the Gimli Glider due to variability, uncertainty, error, bias, or blunder?

- Can I really have Superman's x-ray vision? What are the HP consequences?

then I can predict that you will enjoy the talks lined up for our autumn meeting. We will be extending an invitation for members of the National HPS, who may not be Cascade Chapter members, to join us for the autumn CCHPS meeting. Perhaps we will be able to renew some old friendships, and open some new dialogues. I look forward to seeing you there.

Radioactive Waste Roadshow

What do most people think of when you mention radioactive waste? Glowing green scary stuff!

In reality most of the radioactive waste generated in the United States is low level radioactive waste consisting of paper, plastic, and glass not unlike regular trash with a lot more regulatory oversight mandated by the Low-Level Radioactive Waste Policy Act of 1980.

Who cares about the radioactive waste generated at Oregon State University? Assistant Radiation Safety Officer, Mike Zittle.

Mike has been managing radioactive waste for the past decade and has decided to take his message on the road; training people how to handle radioactive waste safely, and speaking to various groups, recently and most notably, the United States Nuclear Regulatory Commission.

Mike was invited to testify at a public meeting at NRC headquarters in Washington DC. So he obtained a travel stipend from the Nuclear Engineering/Radiation Health Physics (NE/RHP) Department at OSU and also the Campus States Radiation Safety Officers (CRSO), a group of radiation health physicists from campuses across the United States and Canada.

The NRC met on April 10, 2009 to hear input on low-level radioactive waste (LLRW) issues from NRC staff and representatives from government, industry, and medical and research institutions. The issues are complex and many but the bottom line is how best to dispose of LLRW in a safe, equitable, and cost-efficient manner. Most stakeholder groups agree that the management of LLRW needs improvement.

Zittle agrees, "In the thirty years since the LLRW Policy Act was passed, not much has changed. There needs to be more flexibility . . . increased options, increased efficiency, and cost effectiveness while still maintaining the ultra conservative safety levels that we have now." He believes the NRC was genuinely interested in what he had to say about the difficulties and economic challenges universities face in disposing of LLRW.

"At the end of my talk, NRC Chairman Dale Klein shook my hand, and congratulated me for representing the 'forgotten bunch' in the community. They were very appreciative; in fact they gave me an assignment and asked me to compile a list of research activities that are impacted by low level waste issues. I'm working on that now because I like to strike when the iron is hot!" In September, the NRC contacted Mike and asked him to present his findings at another public meeting broadcast online as a webinar on October 7, 2009.

Recently, Mike was invited to speak at the 2009 California Campus Radiation Safety Officers conference at Stanford University in September to present an overview of low-level radioactive waste management practices at an academic institution. Stanford University provided a travel stipend and Mike spoke about his waste management experiences at Oregon State University and presented waste minimization techniques to streamline disposal processes as well as save money on disposal costs.

The main theme resonating throughout Mike's presentation was "Three R's"; Reduce, Reuse, and Recycle. He challenged generators to examine and "rethink" how they generate and dispose radioactive waste. For example, he illustrated how he was able to save Oregon State University \$13,350 on waste disposal costs after extensive research and negotiation by recycling and transferring a radioactive sealed source to another licensee in California in lieu of burying the source at a LLRW disposal facility.

Individuals afraid of radioactive waste should rest assured that radiation protection professionals are working hard to manage radioactive waste safely, ethically, efficiently, and cost effectively especially as stewards of the State of Oregon. Someone once said "The mind is a terrible thing to waste" but Mike Zittle prefers like to think "waste is a terrible thing to mind"!

Mike Zittle is an ARSO at Oregon State University. For questions or comments he can be reached at Michael.Zittle@oregonstate.edu.

Announcements

New chapter officers

During the Annual meeting in May our new chapter officers were sworn in. Howard Wallace is now the CCHPS President after serving a year as President-Elect. He is a Health Physicist at The Boeing Company. The new President-elect is Julia Sober. She is a Compliance

Analyst with the University of Washington. John Gough was elected as Treasurer; however, Mike Zittle agreed to serve a second term as Treasurer. Next time you see these CCHPS members, be sure to thank them for serving the chapter.

2010 Dues

We are now accepting payments for 2010 dues. In order to keep up with the increased operating costs, dues for 2010 have increased. This year's dues are \$25 for Plenary membership, \$20 per person for Group membership, and \$12.50 for Student and Member Emeritus membership.

Benefits of membership include lowered cost of meetings, professional contacts, the Avalanche newsletter, and association with really great people. If you have five or more members in your organization, then a Group membership is the way to go. In addition to the above benefits, each Group member receives free admission to the Annual meeting (lunch is not included).

More information about the different membership categories and the benefits of each type of membership can be found on the [CCHPS website](#).

2010 Elections

The offices open for the 2010 election are Secretary and President-Elect. These terms will run from May 2010 to May 2012. The President-Elect becomes President during the second year.

Serving as a CCHPS officer is a great way to support the chapter and get to know other members. The Nominating Committee consists of Jennifer Johnson, Norm Dyer, and Bill Tuttle. If you are interested in running for one of these offices, you can talk to a member of the nominating committee, or you can contact the chapter secretary, who will forward your information to the committee.

Changes to Radiation Protection Standards

10 CFR 20 and 50

The NRC is currently seeking public comment on potential changes to 10 CFR 20 and 10 CFR 50. Specifically, the NRC is looking at the effects of implementing the recommendations of ICRP 103 (December 2007), which includes lowering the occupational dose limit to 2 rem per year.

"The Commission is concerned about the potential impact of effectively lowering the occupational dose limit to 2 rem [from the current 5 rem] per year," the Commission said in the memorandum. "In developing the technical basis for rulemaking, the staff should examine how lower dose limits have affected the medical and industrial sectors in countries that have implemented them."

A link to the memorandum referred to above, as well as links to other documents related to this issue, can be

found on our [website](#). Members are encouraged to submit any comments or questions by March 31, 2010 to www.Regulations.gov or via email to Reg4rp@nrc.gov.

Generally Licensed Sources

The NRC has proposed changes to the regulations which would change the criteria of generally licensed sources. Under the proposed rule, a general licensee would be required to apply for a specific license if they possess one or more devices containing certain radionuclides greater than or equal to 1/10 the IAEA Category 3 thresholds. A listing of the radionuclides and their limits can be found at [here](#). This rule change would primarily affect fixed industrial gauges, and the goal of the rule changes is to increase the control and accountability of these devices and therefore make them more secure.

This proposed rule was published in the Federal Register on August 3, 2009. It will become effective 60 days after that date. The comply date for General Licensees depends on the state. For Oregon and Washington, the comply date will be established by the state regulators. Comments are still being accepted for this proposed rule and can be submitted at www.Regulations.gov.

Review of the Instadose system

This is just a quick overview of my user experience with the Instadose dosimeter. It is not intended to be a technical review but instead a summary of observations during the brief period of time I had the device.

Instadose, for those not familiar, is a dosimeter approximately the size of a USB flash drive. This device is NVLAP accredited for x-ray and gamma radiation up to 6 MeV, is capable of reading up to 500 rem, requires internet access (and device drivers) and has an expected useful life of between 3 to 5 years (before returning to the manufacturer for replacement).

I received a single device for testing during the month of August 2009. The first step was downloading and installing the Instadose USB device drivers. The Instadose program resides on the manufacturer's servers and is accessible via a web browser. The device is listed as being compatible with the following operating systems: Windows 98SE, Windows 2000, Windows XP, Windows, Mac OS 10.3 – 10.5.4, and browsers: IE 6 SP1, IE 7, IE8, Firefox 3 and Safari 3 and 4. The system I used was a Windows XP system (with SP 3 installed) with both IE 6 SP1 and Firefox 3.5. There were no issues with the system recognizing the device or interacting with the Instadose web page used for collecting and documenting dose readings. I did not test the device on a Vista system (as I continue to refuse to use Vista ☺) and we are a Microsoft Windows office so no Macs were available for me to test.

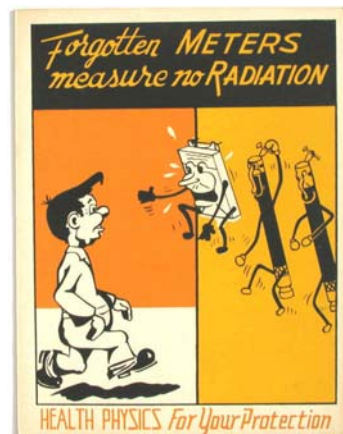
The web interface is rather straight forward, requiring a user login to access individual dosimeter information.

When connected the device begins to download the dosimetry data, which on my rather slow work system, Pentium IV 2.6 Ghz w/ 2 GB ram, took about 1 minute to process. Once processed you receive a report indicating the dose received on the dosimeter since the last reading. The dosimeter is reset each time the unit is plugged in and accesses the Instadose server. Background subtraction is also performed, as the unit operates like any other dosimeter and constantly accumulates dose. Background is determined based on published state background dose rates. If your area has a significantly different background the reading may be affected. I did not note any significant background variation in Seattle, WA vs. the published value though of course I only had the unit for 1 month. Mirion Technologies has indicated that they are working on the ability to include account specific background in the calculations.

I did not test the administrative function of assigning dosimeters to multiple users as I only had a single dosimeter for use.

The unit requires individual interaction in order to download and document dosimeter results though reports can be generated by the facility indicating which dosimeters have been read within a set time frame. The unit may not be the best choice for large facilities unless your users are willing to periodically read their dosimeters (i.e. login to their individual dosimetry account and download dosimetry data). For smaller centers this may be a viable alternative to the use of centrally processed TLDs and Film Badges. I plan on having a few of these dosimeters for emergency management functions, occupational dose assessments for higher dose users such as cath lab and interventional radiology physicians and some environmental monitoring where immediate knowledge of the accumulated dose is useful. Overall I think this is a useful product that can be beneficial for certain applications.

John Gough is the RSO at Swedish Medical Center in Seattle, WA. For questions or comments he can be reached at John.Gough@swedish.org. For more information on the Instadose system contact Nelson Chiu at NChiu@mirion.com.



2009 Fall CCHPS Meeting

The 2009 Fall CCHPS Meeting will be held **Friday November 6, 2009** at the Red Lion Hotel in Olympia, WA.

Agenda

- 9:15 Executive Committee meeting
9:30 Breakfast
9:45 Registration
10:00 Chapter Business Meeting
- Treasurers Report
 - Committee Reports
 - New Business
 - Old Business
- 10:45 National HPS Liaison
11:00 Presentation – Daniel Strom, PhD, CHP (Energy and Environment Directorate, Pacific Northwest National Laboratories) – *“Variability, uncertainty, error, bias, and blunder”*
12:15 Lunch
1:15 Presentation – Bill Bartholet (Associate Technical Fellow, The Boeing Company) – *“Radiation Protection in Space”*
2:30 Break
2:45 Presentation – Daniel Strom, PhD, CHP (Energy and Environment Directorate, Pacific Northwest National Laboratories) – *“Physics, Health Physics, and Applications of Backscatter X-ray Imaging Technology”*
4:00 Meeting Adjourned

Food

Breakfast goodies provided by Seltech will be available in the morning during the registration period. Come early and enjoy coffee, juice and goodies.

Lunch will include a house salad, your choice of Tillamook Cheddar Chive Chicken or Stuffed Portobello Mushroom, New York style cheesecake, rolls, and a beverage. A more detailed menu can be found on the Meetings page of our [website](#). Please indicate your lunch choice on your registration form; or, if you do not want to order lunch please indicate that on your registration form as well.

Goodies will be provided by Mirion Technologies during the afternoon break as well.

Registration

An invitation to the meeting will also be sent to HPS members who are not a part of the chapter, so please send your registration form to the chapter secretary as soon as possible, and no later than October 23rd.

Parking

Parking at the hotel is free.

Cost

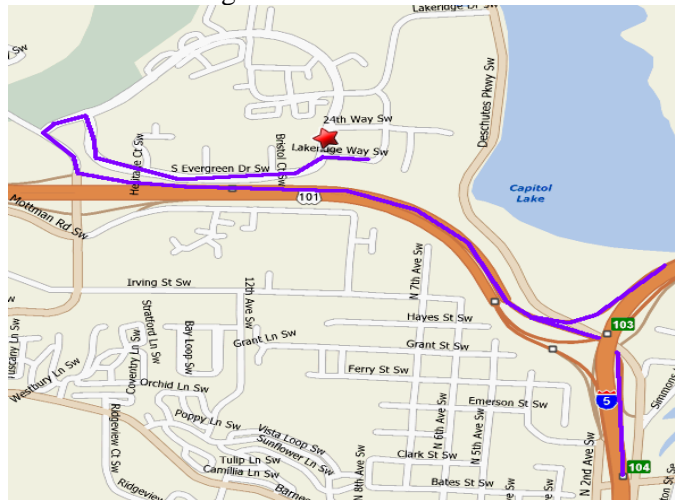
Prices for the meeting are:

	<u>Meeting Only</u>	<u>Lunch & Meeting</u>
Member	\$20	\$25
Non-member	\$25	\$30

Directions to the meeting:

From I-5 (both North and South):

- Take exit #104, US Highway 101.
- Take first exit, Crosby Blvd/Cooper Point Road.
- Off the exit turn right on Cooper Point Road.
- Take immediate right onto Evergreen Park Drive.
- Turn right on South Evergreen Drive SW
- Turn right on Lakeridge Way (adjacent to Morris Business Park sign)
- Continue straight to the hotel entrance.



[Click here for a map](#)

Cascade Chapter Officers:

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President-Elect:	Julia Sober
Secretary:	Philip Campbell
Treasurer:	Mike Zittle
Member-at-Large:	Marge Slauson

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