

The



Tumbleweed

<http://www.midcolumbia.ashraechapters.org>

Don't Miss This Month's Event

Tuesday, November 16

"Tour of the Hanford Laser Interferometer Gravitational- Wave Observatory"

Speaker: An onsite tour presented by Michael Landry of the Hanford LIGO Observatory.

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Presentation on the Hanford Waste Treatment Plant (WTP)

On October 12, the MidColumbia chapter hosted a presentation by Richard Tosetti, Principle Vice President and Manager of Engineering for Bechtal. Mr. Tosetti presented an overview of the Waste Treatment Plant (WTP) and an update on the design and construction progress to date.

The WTP consists of three main processing buildings, an Analytical Laboratory, and additional support buildings and facilities. Construction has been started on the High Level Waste, the Low Activity Waste and the Pre-Treatment Facility buildings.

Hanford Tank Waste will be brought into the Pre-Treat building on the WTP where it will be separated into High Level Waste and Low Activity Waste. From the Pre-Treat building, the waste will be fed to the appropriate vitrification building where it will be mixed with glass formers. After

the molten glass has been formed in the melters, the glass will be poured into containers or canisters and allowed to cool. Lids are then remotely welded on the canisters. Once the canisters have been decontaminated, the canisters are stored in the building prior to shipment to a permanent storage facility.

One of the major engineering obstacles that have been overcome during the design process has been the removal of heat from the melter caves and pour tunnels. Computational Fluid Dynamic (CFD) Analysis has been employed in order to design cooling systems to remove the high level of heat given off by the canisters.

In a related note, on October 20, the Department of Energy announced that, in the first engineering test of bulk vitrification using real waste, two

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ARI and CEE Create Directory of High Efficiency Equipment

In July of this year, the Air Conditioning and Refrigeration Institute and the Consortium for Energy Efficiency, together announced the creation of an online directory of energy efficient central air conditioners and heat pumps at www.ceehvacdirectory.org. Products listed in the

directory meet CEE's energy-efficiency specifications for residential and small commercial (less than 65,000 Btu/h) equipment, including CEE requirements for EER, SEER and HSPF ratings. These products also meet Energy Star guidelines.

ASHRAE to Develop Strategic Research Plan

Research within ASHRAE has historically be driven through projects proposed by ASHRAE technical committees. However no comprehensive Strategic research planning has been done to identify the broader needs of industry and ASHRAE members. In October, ASHRAE announced that it would develop a strategic research planning process, including creation of a five-to-ten year research plan for the society. To ensure the plan will meet those future needs of the society, ASHRAE is seeking input from members, non-

members, industry, and government. At this time, Input is being requested not on specific research topics, but rather on general topic areas (e.g. dedicated outdoor air systems, or adaptive controls, or the relative amount of research going to applied or basic research.

See the ASHRAE *Society Connections*

E-newsletter of October 27 for more information on where to send your input



Chapter President Michele Friedrich

Message from the President

President's Message, November 2004

This is a short message this month as I am working late hours.

Resource Promotion

The Board of Governors is committing \$100 each to ASHRAE research this year (full circle). We are doing this to encourage all the Mid-Columbia members to contribute to ASHRAE research; this can be done on-line, by phone or send check to ASHRAE or Gil Hibbs. Gil has agreed to organize a golf tournament in May or June to raise funds for Resource promotion. If you would like to help Gil with the planning and execution of this please contact him.

Chapter Technology Transfer Committee (CTTC)
A tour of LIGO will be on Nov. 16 at 6 pm - free pizza.

Ron Vallort, ASHRAE president will speak on refrigeration on Dec. 14 (this will be a dinner meeting and our Christmas party).

Congratulations to Bing Liu on the successful delivery of Bishan Liu Zheng, who was born April 12 at 5:30 pm just before the ASHRAE dinner meeting (project completed ahead of schedule). Bishan weighed in at 7 pounds, 10 ounces, and measured 21 inches.

Michele

From The Summit: A Look at ASHRAE's Research Program

By Ron Jarnagin, ASHRAE Vice President



ASHRAE's mission statement calls for the society to "advance the arts and sciences of HVAC&R and related human factors to serve the evolving needs of the public and ASHRAE." To achieve the mission ASHRAE operates an extensive research program which spends \$2-\$3 million annually to advance the arts and sciences of HVAC&R. The ASHRAE research program is fairly unique among technical societies, and the research results contribute to the handbook, standards, education, and publications of the society.

Funding for the ASHRAE research program comes from a combination of the proceeds from the Exposition held at the Winter Meeting and funds raised through the Resource Promotion activities at the grass roots level. Each of the sources contributes about half of the annual funding.

The Research Administration Committee (RAC), made up of ASHRAE volunteers, prioritizes and administers the research program for the society. Research topics are initiated by Technical Committees and then evaluated by RAC for consistency with the needs of and value to the society. Once research topics are approved by RAC the Technical Committees prepare detailed work statements suitable for bidding. RAC then approves and prioritizes the work statements for bidding, and ultimately approves the bidders selected by the Technical Committees.

ASHRAE members have access to all of the information on the approval process of ASHRAE research as well information on current and historical research projects underway through

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Help Sponsor our Website with a Business Card Ad

How would you like to place your business card in front of more than seventy eastern Washington ASHRAE members? For a low \$10 an issue, we can place your business card with company logo in a prominent location in our newsletter.



Interested??? Contact

Kari McDaniel at (509) 371-5113

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This Month's Event

Tuesday, November 16

"Ripples in Space-Time: A Tour of the Hanford Laser Interferometer Gravitational-Wave Observatory"

Description:

ASHRAE, together with IEEE and ASME is sponsoring a tour of LIGO Tuesday, November 16. We will meet in the lobby of the LIGO auditorium at 6:00 PM for pizza. The pizza will be provided by the organizers at no cost to the attendees. The tour will start with a presentation in the auditorium at 6:30 and conclude around 8:30.

Location: Hanford LIGO Auditorium

Directions: The most straightforward way to get to LIGO is to take Stevens Way north out of Richland. Drive about 13 miles to the intersection with Route 10. Turn left onto Route 10 and take it approximately 1-1/2 miles to the LIGO access road on your right.

Maps to LIGO can found at: <http://www.ligo-wa.caltech.edu/visitor.html>

Time and	6:00 - 6:30 pm	Pizza
Schedule:	6:30 pm	Opening Presentation and Start of Tour in LIGO Auditorium
	8:30 pm	Tour concludes

Cost: No fee for this event

RSVP: Please RSVP to Dale Green (degreen@meierinc.com) as a headcount is needed for the pizza

What is LIGO?

LIGO stands for Laser Interferometer Gravitational-Wave Observatory. The purpose of the two LIGO observatories, one on the Hanford Site and one in Livingston, Louisiana, are to search for evidence of gravitational waves created during large-scale stellar events such as supernovae collapse of stellar cores (forming neutron stars or black holes), collisions between these star remnants, rotation of neutron stars, or even fundamental gravitational ripples left over from the creation of the Universe. Each LIGO facility houses a gigantic, L-shaped, Laser Interferometer, 2.5 miles on a side. These interferometers are the world's largest precision optical instruments, and are used to measure minute differences in the length of each arm of the interferometer caused by the passage of a gravitational wave through the earth. To achieve its goal, LIGO must detect movements as small as one thousandth the diameter of a proton, the nucleus of a hydrogen atom.

Come join the November LIGO tour to see the science behind gravitational waves and how the LIGO facility is constructed to detect them.

Upcoming Events

Date: December 14

Time: 6:30-8:30 pm

Location: TBD

Event: An Overview of Refrigeration.

Presented by: Ron Vallort, ASHRAE President, 2004-2005

Date: April 13

Satellite Broadcast

Date: May 4-7

Chapter Regional Conference (CRC)



Mid-Columbia ASHRAE

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The Mid-Columbia Chapter of the American Society of Heating, Refrigerating, and Air Conditioning Engineers was chartered in 1981 in Richland, Washington. We are part of ASHRAE Region XI and represent ASHRAE members in Eastern Washington State

From the Summit, continued

the society website at www.ashrae.org. Once on the site click on Technology and Standards, and then click on Research in the panel on the left.

Scroll down to Research Topics In Development and then click on the Research Plan to learn everything you want to know about potential upcoming ASHRAE research

Waste Treatment Plant, continued

gallons of radioactive and chemical waste from Hanford's underground tanks have been successfully turned into glass. Bulk vitrification is a proposed alternative process to use of the WTP for processing of low level radioactive waste from the Hanford Storage Tanks. The State of Washington is reviewing a proposal to build and

operate a bulk vitrification test plant to treat up to 200,000 gallons of low level waste.

