

# WORKERS' SPOTLIGHT

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## A NOTE FROM THE DIRECTOR

By Greg Lewis

2013 marked a huge milestone for both the Energy Employees Occupational Illness Compensation Program (EEOICP) and Former Worker Medical Screening Program (FWP); and coincidentally, it was the exact same number for both programs. Over the summer, the FWP

conducted its 100,000<sup>th</sup> screening exam, and just before the end of the year the Department of Labor (DOL) received a claim for its 100,000<sup>th</sup> worker. It is always rewarding to hit milestone numbers, particularly when it's such a big number, but we are very aware that our work is not done yet. Over the last year, I personally have

spoken with many workers who were just hearing about one or both programs. There are still many individuals who we have not reached, and worker outreach is as important as ever for both programs.

The Department of Energy (DOE) continues to work with DOL, the National

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## THE AUDIOGRAM

By Maureen Cadorette, PhD, Former Worker Program Principal Investigator

The audiogram is an evaluation of how well an individual can hear. Sounds are presented to the individual through earphones during the test. These sounds are presented at different levels of frequency and intensity. The human ear responds to the frequency or pitch of a sound and the intensity or loudness of the sound. The frequency of the sound is measured in Hertz (Hz), and the loudness of the sound is measured in decibels (dB). An individual has no impairment in hearing if he or she detects the sound that is presented through the earphones in

the range of 0 to 25 decibels. The audiogram indicates how much louder (in decibels) the pure tone frequency must be for the tested subject to hear it compared to what the normal, general population needs to hear it.

There are two primary types of hearing loss. Conductive hearing loss occurs when there is an obstruction or breakdown in the system that transmits sound through the ear, including the ear canal, the ear drum (called the tympanic membrane), and the three small bones on the inner side of the ear drum. Ear wax, infections, and damage to the eardrum are common causes of conductive hearing loss. Conductive hearing loss is often reversible with

treatment (Council for Accreditation in Occupational Hearing Conservation [CAOHC], 1993). Sensorineural hearing loss is caused by damage to the hair cells of the inner ear (called the cochlea) or to the nerves that carry sound to the brain (CAOHC, 1993). Sensorineural hearing loss is usually permanent. The two most common causes of sensorineural hearing loss are aging and noise of an occupational or non-occupational nature. It is thought that some workplace chemicals can also contribute to sensorineural hearing loss. The National

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## GETTING TO KNOW SITE EEOICPA POCS



Rochelle Zimmerman has worked with the EEOICPA Program for the Portsmouth/Paducah Project Office (PPPO) since May 2011.

Rochelle is the Safety Program Analyst for PPPO with ancillary responsibility for the EEOICPA program. Rochelle coordinates the EEOICPA program for two different sites located in Paducah, Kentucky, and Portsmouth, Ohio.

Prior to her employment with the Department of Energy, Mrs. Zimmerman was in the Air Force working in Aerospace Medicine. When not at work, she enjoys traveling with her husband Jack and spoiling her two grandchildren. ■

## AMERICAN MUSEUM OF SCIENCE AND ENERGY

By Cecelia Kenney and Greg Lewis

Did you know that the Department of Energy (DOE) supports five major museums located at or near DOE field sites? During a recent visit to Oak Ridge National Laboratory, we had a chance to visit one of the five—the American Museum of Science and Energy (AMSE). Because our audience for this newsletter is so diverse, and many of you travel to different sites throughout the country, we thought you might be interested in a series of articles that take you on a journey, not only of the museums, but also of the historic facilities and visitor centers around the DOE complex that are open to the public. Many of these pay homage to DOE former workers and the work done by DOE.

As you enter AMSE, you are greeted by a sculpture, on loan to the museum, created from scrap metal pieces from the fallen twin towers in New York City.

Once inside, you are greeted by a temporary exhibit of black and



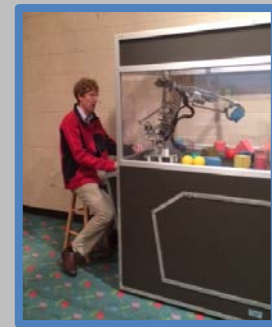
white photography by the official photographer of the Manhattan Project, Ed Westcott, while the sounds of movies containing original news clips on the events of the time are heard from the auditorium. To the right is “Oak Ridge, World War II Secret City,” an exhibit that guides you through the creation of the Secret City, including video footage, documents and artifacts.



Sculpture made of metal from the fallen Twin Towers

Other permanent exhibits include the Exploration Station, Y-12 and National Defense, Earth's Energy Resources, and the World of the Atom. The museum has many hands on activities for all as witnessed in the picture of HS-14

Director, Greg Lewis attempting the challenges at hand.



One of the newer exhibits is that of an original “flat top” house built for Oak Ridge residents in the 1940s. The 574-square-foot home contains one bathroom, two bedrooms, a kitchen and small common living area, built of plywood over a wood frame. The home was built in sections of one, two, or three bedrooms, depending on the size and gender balance of the family that would occupy it.

The house was purchased at auction in 1950 for \$828 and moved to Norris Lake, where for more than six decades it remained very nearly in its original state. The daughter of the owner who purchased the home at auction donated it to AMSE and after it was refurbished, was open to the public.

### TRIVIA QUESTION

And speaking of museums, where and when was the first public museum in the United States established?

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**AUDIOGRAM** *cont.*

Institute on Deafness and other Communication Disorders has developed a reference chart (Figure 1) that provides examples of everyday sounds, along with the measure of their loudness in decibels.

The Occupational Safety and Health Administration estimates that 30 million people in the United States are exposed to hazardous noise in the workplace. Even though it is one of the most common occupational illnesses, noise-induced hearing loss (NIHL) often goes unrecognized because there are no visible effects, it usually develops gradually and over a long period of time, and there is often no pain associated with it

Decibels	Sound Source
150	Firecracker, rock concert
120	Ambulance siren
110	Chain Saw
100	Snowmobile
95	Motorcycle
90	Lawn Mower
80	City traffic noise
60	Normal conversation
40	Refrigerator humming
20	Whispered voice
0	Threshold of normal hearing

(<http://www.osha.gov/SLTC/noisehearingconservatin/index.html>, accessed November 8, 2010). NIHL is considered an occupational illness rather than an injury because it usually progresses over time (CAOHC, 1993). While it is possible that hearing loss can occur from a single event, such as an explosion, most occupational NIHL results from exposure to continuous noise above a certain level (CAOHC, 1993). There is also evidence that exposure to industrial chemicals, such as heavy metals and solvents, is toxic to the nervous system and may cause hearing loss. Research has shown that the combination of exposure to these substances with noise may work together to increase the risk of hearing loss (CAOHC, 1993).

**Figure 1**

Ringing in the ears (called tinnitus) often accompanies hearing loss, and is a sign of irritation to the sensory cells of the inner ear and may be a warning sign for NIHL (CAOHC, 1993). Another important cause of sensorineural hearing loss is aging. As people get older, many of our special senses, such as sight, smell, hearing, or taste, decline in their abilities. Age-related hearing loss is called presbycusis. The onset of presbycusis varies between individuals, and the onset and the magnitude of hearing loss associated with the aging process may begin as early as age 50 years (CAOHC, 1993). Presbycusis is often greater in the higher pitched levels of sound (that is, for the higher frequencies of 4,000 or more Hertz).

References:

Council for Accreditation in Occupational Hearing Conservation. 1993. *Hearing Conservation Manual* (3rd edition). A. Suter (Ed.) Milwaukee, Wi: CAOHC.

U.S. Department of Health and Human Services. National Institutes of Health. National Institute on Deafness and Other Communication Disorders (NIDCD). *How Loud is Too Loud?*

<http://www.nidcd.nih.gov/health/hearing/ruler.html>, downloaded November 24, 2010. ■

**MUSEUM** *cont.*

This home also has a special connection to the EEOICPA program as it was the childhood home of Robert (Bob) Presley, who was a longtime member of the Advisory Board on Radiation and Worker Health before he passed away in 2011. Bob was on hand at the museum for the opening of the Flat Top House Exhibit and was fond of saying that only he and Abraham Lincoln have their childhood homes in a museum.

Prior to leaving the museum, we

were able to visit the small gift shop where I purchased a book, *The Girls of Atomic City, The Untold Story of The Women Who Helped Win World War II*, a book highly recommended not only for the historic aspects but also the example of sacrifice made by not only the women, but men and children of that time, for the sake of our country.

If you are in Oak Ridge, it is worth the time and \$5 admission fee to visit this museum; we are sure



Flat Top House in 1940



Flat Top House Today

you will learn something that you didn't know about the "Secret City." ■

# Calendar of Events

## January



- 2 9:00 am Local Event  
X-10/Y-12 Asbestos Retiree Meeting  
Shoney's, 3739 West US Highway 9, Lake City, TN
- 6:00 pm FWP Event  
K-25 AGRE Meeting  
USW Union Hall, 133 Raleigh Road, Oak Ridge, TN
- 7 8:00 am FWP Event  
Mound Retiree Breakfast  
Bob Evans Restaurant, 220 Byers Road, Miamisburg, OH
- 9:00 am Local Event  
Y-12 Retiree Meeting  
Shoney's, 204 S Illinois Avenue, Oak Ridge, TN
- 9 11:00 am Local Event  
X-10 Guards Retiree Meeting  
Shoney's, 1100 US 321, Lenoir City, TN
- 16 11:30 am FWP Event  
Mound Retiree Luncheon  
Golden Coral, 8870 Kingsridge Drive, Miamisburg, OH
- 21 12:00 pm Local Event  
X-10/Y-12 Machinists Local 480 Retiree Meeting  
Local 480 Hall, Oak Ridge, TN

## February

- 4 8:00 am FWP Event  
Mound Retiree Breakfast  
Bob Evans Restaurant, 220 Byers Road, Miamisburg, OH
- 9:00 am Local Event  
Y-12 Retiree Meeting  
Shoney's, 204 S Illinois Avenue, Oak Ridge, TN
- 5 7:15 am Local Event  
X-10 Retiree Meeting  
Shoney's, 8529 Kingston Pike, Knoxville, TN
- 9:00 am Local Event  
Y-12 Inspector Group Meeting  
Shoney's, 1100 US 321, Lenoir City, TN
- 11:00 am Local Event  
Y-12 Guards Retiree Meeting  
Shoney's, 1100 US 321, Lenoir City, TN
- 4:30 pm FWP Event  
X-10/Y-12 ATLC Council Meeting  
ATLC Union Hall, 109 Viking Road, Oak Ridge, TN
- 6 9:00 am Local Event  
X-10/Y-12 Asbestos Retiree Meeting  
Shoney's, 3739 West US Highway 9, Lake City, TN
- 6:00 pm FWP Event  
K-25 AGRE Meeting  
USW Union Hall, 133 Raleigh Road, Oak Ridge, TN
- 13 11:00 am Local Event  
X-10 Guards Retiree Meeting  
Shoney's, 1100 US 321, Lenoir City, TN
- 18 12:00 pm Local Event  
X-10/Y-12 Machinists Local 480 Retiree Meeting  
Local 480 Hall, Oak Ridge, TN

## DIRECTOR *cont.*

Institute for Occupational Safety and Health, and their respective Ombudsmen, as well as the different FWP projects, to hold Joint Outreach Task Group (JOTG) meetings near DOE sites. We are currently finalizing our schedule for the coming year, and we tentatively have the first meeting scheduled for February in Denver, Colorado. You can find more information on this and other worker meetings on the back page of this newsletter and on our Web site at the following link: <http://energy.gov/hss/calendars/joint-outreach-task-group-jotg-events>.

Looking forward to the coming year, DOE is partnering with the other members of the JOTG to release an outreach video; and we will provide more information in an upcoming newsletter. In addition to conducting outreach with other agencies, we are also doing some outreach within DOE to help raise awareness of the EEOICP and FWP within the DOE program offices at Headquarters and in the field. ■

## February cont.

- 18 5:00 pm Local Event  
Y-12 Gage Lab  
Gondolier, 729 Briarcliff Ave, Oak Ridge, TN
- 20 11:30 am FWP Event  
Mound Retiree Luncheon  
Golden Coral, 8870 Kingsridge Drive, Miamisburg, OH

For a complete list of calendar events, visit:

[http://www.hss.doe.gov/healthsafety/FWSP/Formerworkemed/events\\_calendars.html](http://www.hss.doe.gov/healthsafety/FWSP/Formerworkemed/events_calendars.html)

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**Trivia Answer:** The Charleston Museum in Charleston, South Carolina, was established January 12, 1773, and is considered the first public museum in the United States.

American museums host approximately 850 million visitors each year, more than the attendance for all major league sporting events and theme parks combined (471 million).