

From: Waggoner, Larry O
Sent: Friday, May 11, 2007 3:05 PM
Subject: ALARA Center Activities for Week of May 7, 2007

Attachments: Cow 2.jpg; Prevention of Heat Stress during Rad Work May 10, 07.doc
Visit our Website at www.hanford.gov/rl/?page=974&parent=973

1. Received a 9" Evolution Steel Cutting Circular Saw and blades for carbon steel and stainless steel for display at the Center. This saw was tested two weeks ago and was able to cut 1/2" thick carbon steel plate at a rate of 24"/minute. We still have the steel plate if anyone is interested in giving it a "test drive". Read about this saw at <http://mtechsales.com/products/CircularChopSaws/> or call Tom Johnson at (866) 386-8665 or email tomj@hitechevolution.us **NOTE: Last week's report also included a picture of this saw. This is an outstanding tool. If you're doing D&D, it will save you time, money and person-rem. It does give off a small amount of sparks so you have to have a "hot work" permit.**



2. Discussed HEPA filtered vacuum cleaners with Field Engineer from WCH. They are looking for a vacuum cleaner that draws about 180 CFM and runs on a 15 amp circuit. Recommended they contact Power Products and Services at (843) 545-0766 and look at Tiger Vacuum Cleaners at http://www.tiger-vac.co.uk/pages/products/industrial/portal_indus.html Another operator from Fluor was looking for a small HEPA-filtered vacuum cleaner so recommended the GM-80 Nilfisk that costs ~\$800.00.

3. Received a call from Chris Mickelsen, a Bettis Engineer at the Naval Reactor Facility at INEEL, who was looking for cutting tools that could be used underwater at the Expanded Core Facility for cutting stainless steel components. Suggested C.S. Unitec Reciprocating saws with the blades developed for Hanford for cutting stainless steel, web site: www.csunitec.com , Champion Rescue Tools- blade-plunging cutter, web site: www.championrescuetools.com/content/view/15/28/, and Wachs Guillotine saw, web site: www.washsco.com. Received call from H. Dukes, who now works for Parsons at SRS. She is trying to make improvements in the SRS Tank Farms and wanted to know the name of the engineering company that designed long-handling tools for K Basins and is now working with CH2M to make better tools for Tank Farms. Told her to contact Chris Smith at www.intellegrationLLC.com

4. Last week's report discussed FFTF's investigation into using carbon-dioxide pellets to decontaminate materials. We were reminded about another method called Nitrocision, which uses high pressure liquid nitrogen jet to blast surfaces clean. Info on Nitrocision was forwarded to Rick Berk, the Rad Engineer working this project. Both processes create no secondary waste stream, but Nitrocision reportedly does not cause the abrasion and scratching of surfaces the CO-2 blasting does. The vendor is James Crocker, P.E., TRUTech LLC. in Richland at 943-1251. Forwarded info to K Basins Management on how to obtain photos showing how the basins were constructed. These photos could help with D&D planning. To look at old documents and photos of the Hanford site, go to <http://www2.hanford.gov/DDRS/index.cfm/>, click on Simple Search in the gray line, and type in what you want to search for. Then hit Search.

VENDOR CORNER

Concerned about worker safety in hot environments? Check out the Thermo Fisher Scientific MATRIX Physiological Monitoring System - The MATRIX Physiological Monitoring System utilizes

LifeShirt, a lightweight chest strap with embedded sensors that measures breath rate, heart rate, activity level, posture and skin temperature. This critical data is transmitted to a command center where safety officers, using the advanced Viewpoint software system, are empowered to make informed real-time decisions concerning worker safety. The Viewpoint software can also be integrated with the Thermo Scientific EPD Mk2 personal radiation dosimeter.

http://www.thermo.com/eThermo/CMA/PDFs/Product/productPDF_30749.pdf

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EDITORIAL It's getting hot! Our aging work force is one year older. It was over 90 degrees this week and those facilities that didn't solve their heat stress problems last summer are starting to call. One of the things that always comes up is whether facilities should switch to a more breathable single-use only protective clothing. If you're contemplating making the switch recommend you read the article "To Toss or Not to Toss - That is the Question. Find the article on the American Nuclear Society website at www.ans.org. Click on "Publications", select "RadWaste Solutions", select 2006, and select Jan/Feb. Scroll down the list and click on the article. NOTE: In a few days, ANS will update the website and provide a 14 page list of all the articles that have been in previous issues of RadWaste Solutions from 1994-2006. This list is currently in the Jan/Feb issue of 2007, but it doesn't show up on the website, yet. Should you decide you want a copy of these old articles, contact Sue Cook at scook@ans.org and for a nominal fee, she will copy and send them to you. You can see the list from 1994-2005 by looking at the Jan/Feb 2006 magazine. These articles are the best presentations given at ANS Conferences each year. Another article you might want to read is the Jul/Aug 2004 issue on the West Valley Remote Handled Waste Facility.

Last year CH2M used OREX disposable clothing on some jobs where there was an increased risk of heat stress injuries. Contact Lee Livesey at 373-1975 for specifics on when this clothing is authorized. See www.orex.com They also used Arctic Heat Vests that were wetted, frozen and worn under their protective clothing. See <http://www.arcticheat.com.au/> Fluor personnel working the burial grounds purchased backpacks made by Outdoor Products and CamelBak. Call John Miller at 373-6188 for details. These were filled about 1/3 full with water, frozen and then topped off with water before workers wore them. Each has a tube with a valve on the end that the worker can bite and get a drink. See <http://www.outdoorproducts.com/proddetail.aspx?sku=4311OP> and http://www.camelbak.com.au/seureshop/category.php?cat_id=27

WCH has written a Lessons Learned Bulletin on Heat Stress and you can read it at http://www.washingtonclosure.com/about/safety/docs/Lessons_Learned_Monthly_Bulletin_May_2007.doc An document that explains heat stress that is easy to read can be found at http://www.bartlettinc.com/filelibrary/Heat_Stress_EZ_EXPLANATION.pdf Lastly, the ALARA Center Handout that describes more details on how to prevent heat stress is attached.

LECTURES AND SUCH

- A. Herbert Parker Lecture on Radiation: Terrorism & Public Preparedness, Thursday, May 17 at WSU, 4:00 PM
- B. Terrorism and Preparedness Symposium Friday, May 18, 8:00 to 5:00 at Battelle Auditorium
- C. ANS-EWS monthly meeting on Weapons of Mass Destruction, Tuesday May 15, at 6:00 PM at the Shilo

FOR YOUR INFORMATION

1. Last week Waggoner attended the Federal Project Manager's Conference and gave a presentation on the Hanford ALARA Center. DOE HQ EM-23 has designated the Center as the D&D Hotline, where companies can call and get help. We will be supplied with a list of points-of-contact in case we don't know the answer to the caller's question. In addition, I invited the Project Managers to a one-day hands-on presentation at the Savannah River ALARA Center on October 17, 2007. As part of the trip, Paul Greenbaum, a former Rad Engineer from Hanford, provided an all-day 200 mile tour of the Nevada Test Site. We toured the old bomb blast areas and observed radiological work currently in progress. The Nevada Test Site has an extremely interesting website. Attached is a photo from this website showing a glovebag attached to a bull. The glove was used to remove partially digested food for analysis. The photo is courtesy of the National Nuclear Security Administration/Nevada Site Office. Recommend looking at www.nv.doe.gov.

2. Received a 12 megabit file of a 115 Page Report written on Remote D&D of several facilities at Oak Ridge. Report was prepared for DOE by NuVision Technologies (AEA Technology Engineering Services). Forwarded hard copies of the report to key personnel doing D&D at Hanford and emailed ALARA personnel at other DOE Sites. Anyone needing a copy of the report should contact L. Waggoner.

3. Obtained wallet cards from Dan Strom of PNNL on the "Ten Principles and Ten Commandments of Radiation Protection". Dan gave this presentation a few years ago at an off-site conference. The presentation describes all the concerns we have about protecting workers besides the ALARA principles of Time, Distance, Shielding, and Source Reduction. Read the presentation at <http://qecc.pnl.gov/10Prin.pdf>. Copies of the presentation and the wallet cards are at the ALARA Center. This is a good article for all personnel concerned about protecting radiological workers.

4. Possible new products for containing spills. See <http://www.spillcontainment.com/>, <http://www.eldredenvironmental.com/>, <http://www.environmenticsinc.com/SpillContainment.htm>, and <http://www.gitank.com/above.htm>. Many of our old facilities have piping that was used to transfer acids and the pipe wall has been eaten away. If you need to patch it and tear out the pipe later you might want to look at www.neptuneresearch.com for a patching kit made from fiberglass cloth and activated urethane resin.

5. Received message from *Nimi Rao, REMS Program Manager, Health Physicist, DOE HS-31, Office of Corporate Safety Programs*
Phone: 301-903-2297 e-mail: nimi.rao@hq.doe.gov Radiation Exposure Monitoring System (REMS) has received the 2006 data from all DOE sites. Statistical data has been posted on REMS web site at <http://www.hss.energy.gov/CSA/Analysis/remss/remss/ri.htm>. For 2006, all collective doses decreased. Because the number with measurable dose decreased by 20%, the average measurable dose increased by 2% from 0.061 rem to 0.063 rem. **No individuals exceeded 2 rem (first time ever that has happened) or 5 rem, or any other dose limit.**

6. Received call from Florida International University concerning the placement of a student intern at the ALARA Center for the summer. DOE HQ has provided the funding through a grant to pay all expenses. The plan is to develop a D&D website that any DOE contractor can use to read about the latest technology and get help with work planning, latest practices, tools, equipment and lessons learned. We will work with Human Resources to bring this person on board.

7. The Hanford Health & Safety Expo is May 22 and 23 at TRAC. The ALARA Center staff will be manning a booth during that week and the Center will not be open. Personnel can contact the staff by calling (360) 801-6322.

8. The OSHA Website has "Quick Cards" that can be used to protect workers. A list of these cards can be found at <http://www.osha.gov/OshDoc/quickcards.html> T. Giltz/G. Perkins returned the samples of Hexarmor gloves that were displayed at the EFCOG Radiation Protection Work Group meeting in

Atlanta. Attendees were extremely interested in these cut and puncture resistant gloves that are becoming widely used at Hanford. See www.hexarmor.com and check out the videos showing the gloves versus hypodermic needle.