

From: Waggoner, Larry O

Sent: Friday, June 08, 2007 2:27 PM

Subject: ALARA Center Activities for Week of June 4, 2007

Attachments: Guidelines for Decontaminating a Spill Area that Can.doc; 3745B and water gun.JPG

Visit our Website at www.hanford.gov/rl/?page=974&parent=973 CH2M is going to sponsor an ALARA Workshop to be given in February, 2008 at Hanford. Time/place will be announced later. Personnel interested in being part of the committee should contact Owen Berglund at (509) 376-9035 or at owen_d_berglund@rl.gov. We will pick a theme but we're sure it will be directed at the tools, equipment, and work practices used to accomplish radiological work. If you think you might attend, start thinking about a presentation. We will make you famous!

1. Tom Haan, from SW&SD visited the Center to disassemble our clean GM-80 Nilfisk HEPA filtered vacuum cleaner so they could write a procedure for clean out of their contaminated vacuum cleaner. Henry Doolittle and a co-worker from WCH visited the Center looking for tools and equipment for future work. Items discussed were the use of polyurea as a fixative, diamond wire saws, concrete chain saws and circular concrete saws for cutting concrete, use of a BROKK for demolishing of a facility, use of nibblers and circular saws for cutting steel and containers for large columns for shipping. The Center gave them information on numerous vendors of the different tools and equipment.
2. RCT visited the Center looking for shielding to wrap a radioactive gamma source. Gave him info and business card for Ecomass Technologies, at www.ecomass.com. Sent info on Protech 2000 nylon protective clothing to ALARA Coordinator at D&D Rad Protection. See www.unitech.ws Discussed use of shrouded tooling to scarify concrete. See the photos and helpful hints at <http://www.descomfg.com/Products/tipstricks.htm>. These tools have a vacuum cleaner connected that collects most of the debris created when the tool is used. Loaned our 9" Evolution circular saw to FFTF shop personnel. They need to cut the top off a component and were looking for a new tool that would cut 1/4" steel. The saw cut 1/2" steel earlier at a rate of 24" per minute. Plan is to demonstrate the saw Monday at the 400 Area Shop.
3. Conducted the PHMC ALARA Council meeting for June. Provided 2 hours Containment Training on Glovebags to 13 RCTs as part of their continuing training cycle. This training is half-classroom and half-practical exercise. PFP personnel have moved new mockups into the ALARA Center to use in training workers on techniques for glovebox cleanout and size reduction. This training will be conducted over the next few months. Forwarded info on TRU waste drum venting and sorting to PNNL person working with SRS personnel. T-Plant vents each drum remotely in a glovebag. To sort the waste, the lid is removed in a drum inspection hood connected to a HEPA filtered vent system. The air flow across the top of the drum is so great that no airborne or fumes gets in the worker's breathing zone. After the lid is removed, a sleeve is attached to the top of the drum and the drum raised and tilted so its contents spill into the glovebag, where it is sorted. Point of Contact at T-Plant is L. Rathbun at (509) 376-5479.
4. Last week I sent out a message to other DOE sites concerning whether they air condition containments during summer months. Replies received so far from Oak Ridge reveal they usually use other methods besides air conditioning to keep workers cool. These methods include use of misters, increasing the ventilation flow rate, wearing lighter weight "scrubs" as modesty clothing, cooling the entire space around the containment and using a spot cooler inside the containment. OPINION: It seems to us that if a vendor marketed a turnkey system that included an air conditioner, HEPA filtered vent system and hoses, there would be a market. Containments have been air conditioned before for special jobs, but it seems as soon as that job is complete, no one uses air conditioning on the next job. M. Long from Oak Ridge forwarded a message from her HVAC personnel who had contacted a local vendor. The vendor indicated they could put a turnkey system together, but would need more info. The vendor Point of Contact is Steve Sturgeon at steves@reahvac.com. Talked to NFS/RPS and they too indicated if anyone wanted to air condition a containment that they had previous experience and would provide a cost

estimate. See www.nfsrps.com. The Bottom Line seems to be: The technology is available and there are vendors who have experience in cooling containments. All we need to do is describe our needs and have the funding. We think that the workers would be safer and the increase in productivity would soon pay for the unit.

Larry Waggoner / Jerry Eby
Fluor Hanford ALARA Center
(509) 376-0818 / 372-8961

FOR YOUR INFORMATION

1. Had an inquiry about actions necessary to recover if a spread of radioactive contamination occurs that can't be quickly cleaned up and the area released from radiological; controls. Attached is a memo on the guidelines we think are needed to recover from a complex spill. If anyone knows of other actions, please share them with us.

2. The Savannah River ALARA Center's website is www.srs.gov/general/programs/alara. Points of contact are Robbie Bates at (803) 208-3601 and Ellen Parrish at (803) 208-3603. This info was part of their last Monthly Report.

Heavy duty carts made by Rubbermaid are being used by Radcon. Read about them at www.rubbermaidwholesale.com/product_info.php?products_id=284

- Interested in checking your ventilation flow with helium bubbles instead of smoke? Check out www.sageaction.com. The bubbles are easy to see and can be photographed much easier than using smoke. Read the brochure at http://www.sageaction.com/Papers_and_articles/2007%20SAI%20Complete%20Brochure.pdf
- SRS has been working with Thermo Fisher Scientific "LifeShirt" on testing their physiological monitoring system. It consists of a chest strap with embedded sensors that measure breath rate, heart rate, activity level, posture, and skin temperature. This critical data is transmitted to a command center where it is monitored for worker safety. These units could be used with the Thermo Scientific Electronic Dosimeters. SRS is deciding whether to do a formal test of this technology.

Read about this at <http://www.thermo.com/com/cda/product/detail/1,,10123702,00.html>

3. (New Products)

Portable Glove Boxes made by Labconco Corp. User can customize them with their choice of over 60 accessories to meet specific applications. They are made from a one piece molded medium-density polyethylene shell, with a black, chemical resistant work surface sealed to the glove box floor. They also have space-saving inner and outer transfer chamber doors that pivot upward, are counterbalanced and equipped with quick latches and a pressure relief valve, See <http://www.labconco.com/Scripts/EditC25.asp?catid=399>

Remote Releasing Hook. The 2.5 Ton Rig Release can release rigging remotely or by pulling on a cable. See the website and watch the video at <http://www.caldwellinc.com/NewProducts.htm#rigrelease>

4. The latest Operating Experience Summary (2007-03) has an article on "**PPE and Engineered Controls can Prevent Welding Exposure to Hexavalent Chromium**". A table in the article reads:

How To Reduce Exposure to Welding Emissions

- Use local exhaust ventilation and fume-extraction welding guns to keep the breathing zone clear of particles and fumes.
- Ensure that exhaust-capture nozzles are properly placed and are not too far from the work piece, which would allow fumes to remain in the breathing zone.
- Wear a helmet and position your head to minimize exposure to fumes in the breathing zone.
- Wear appropriate respiratory protection.
- Use special care when welding in a confined space, and provide additional ventilation/exhaust as necessary.
- Sample and monitor the breathing-air zone for concentration of contaminants.
- Read the MSDS for electrodes, and heed any warnings on the electrode container (e.g., electrodes containing chromium and manganese).
- Select materials that minimize chromium.

The use of engineered controls (local exhaust ventilation) and appropriate protective clothing, respirator can protect welders from exposure to hexavalent chromium and other metals, such as beryllium, iron oxide, and manganese. Local exhaust ventilation should be used for all indoor welding and cutting. If stainless steel welding is performed in an enclosed space where local ventilation is impractical, approved air line respirators should be worn. For stainless steel welding and cutting outside, approved respirators should be used; and, again, using an air line respirator rather than an air-purifying fume respirator will provide the best level of protection.

Additional info on the safety concerns with hexavalent chromium can be found at: www.osha.gov/SLTC/hexavalentchromium, and www.cdc.gov/niosh/topics/hexchrom/.

5. WCH forwarded a photo of their hose monitor used to spray water and fixatives on debris piles created during D&D. The unit can be remotely operated from up to 1/4 mile away. This allows workers to be protected during inclement weather and reduce their risk of injury while the excavator is demolishing a building. <http://www.guardianfire.com/products/firemonitors/remotecomrolmonitor.html>.