

**From:** Waggoner, Larry O

**Sent:** Thursday, July 12, 2007 1:30 PM

**Subject:** ALARA Center Activities for Week of July 9, 2007

**Attachments:** 991 foam fire.doc; Foam Test at ORNL.doc

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1. Attended the first planning meeting for the ALARA Workshop being planned for February, 2008. Actual dates for the 2-day event will be decided next week after meeting with area motels. Jerry Eby will contact up to 50 vendors to display products. A flyer will be sent out requesting abstracts to be submitted by mid-November. Total attendees will be limited to about 150 due to the size of the motel conference rooms. The registration fee will be \$75.00, which is a bargain. *Registration at a similar American Nuclear Society 3-day meeting on D&D is \$825.00.* Focus of the workshop is on the tools, equipment and work practices used to accomplish radiological work and the lessons we're learning. Owen Berglund of CH2M is the Workshop chairperson at (509) 376-9035.
2. Discussed contamination control problem with D. Andrews, the T-Plant ALARA Coordinator. They are encountering an occasional contamination spread during the handling of drums inside their Permacon containments. Discussed the benefits and potential problems of wearing a second set of breathable protective clothing versus adding an apron, arm sleeves and/or knee pads to the single suit they are wearing now. There is concern that adding the second set will create heat stress problems. Recommended they read <http://www.osti.gov/bridge/servlets/purl/399712-XcBWY2/webviewable/399712.PDF> on "Radioactive Contamination Incidents Involving Protective Clothing". Talked to Lanc's Industries and they can custom make aprons if T-Plant decides to try them out. See [www.lancsindustries.com](http://www.lancsindustries.com). Another idea might be to trim the back of a lab coat and wear that over the single set.
3. Received a call from Ed Ham who is working on the preparations for remote demolition of the K-Basin fuel pools. Current thinking is to drain the water over an 8 week period, add some grout and fill the pool up to the edges with sand. All this would be done with no manned entries into the building. The building would then be demolished using excavators with misters and dust suppressants to prevent airborne contamination. The pool would then be demolished by nibbling from the top with a large claw while applying more mist and dust suppressants. Ed is talking to Encapsulation Technologies about fogging an aerosol fixative inside the building during lowering of the water level to fix contamination exposed as the water level decreases. We are looking to see if we could find a fixative, such as oil, liquid floor wax, Polymeric Barrier System, or other product that would float on the water and coat the walls as the water level is lowered. The product would have to remain a liquid while it was in the pool. Another possibility is to use underwater divers to apply paint if they get approval to use divers in the fuel pool. Bartlett Services is talking to planning personnel about using a wall-walking robot platform to paint the walls, prior to lowering the water level. See [www.icmachines.com](http://www.icmachines.com). They will invite the ALARA Center staff to future planning meetings.
4. Chaired the PHMC ALARA Council meeting for July. Loaned WCH personnel a poly bottle adapter and HEPA filter for use at Building 327. SWSD Radcon called requesting info on companies that sell hydraulic or battery-powered cutting tools. Recommended he look at NuCut, [www.nucut.com](http://www.nucut.com), Champion Rescue Tools, [www.championrescuetools.com](http://www.championrescuetools.com), and Power Hawk, [www.powerhawk.com](http://www.powerhawk.com) as examples of this type of tool. Picked up our Evolution Metal Cutting circular saw from FFTF. Their maintenance personnel are very impressed and have a purchase order in to buy the 7" diameter Model 180 that cuts 1/4" steel. See [http://www.oceanmachinery.com/evolution\\_saw.htm](http://www.oceanmachinery.com/evolution_saw.htm) Showed CH2M Radcon planner the shrouded tooling we have made by Desco. They want to roughen the paint in a highly contaminated area and like the idea of a walk-behind unit that has a connection for a HEPA filtered vacuum cleaner. Gave them brochures for Desco tools. See [www.desco.com](http://www.desco.com).

5. (D&D Hotline) Received a call from a firm looking at methods to size-reduce components underwater at a fuel pool at Brookhaven Lab. Recommended they look at pneumatic tools sold by Wach's at [www.wachscos.com](http://www.wachscos.com) and CS.Unitec at [www.csunitec.com](http://www.csunitec.com) or a hydraulic shear sold at [www.championrescuetools.com](http://www.championrescuetools.com). Recommended that if they decide to use a saws-all, they purchase thicker blades that are less likely to break from the saw manufacturer or from [www.magbit.com](http://www.magbit.com). They called back and said they would probably use the Guillotine saw from Wachs. Got a call from Rad Engineer at Indian Point power plant in upstate New York looking for info on the use of HEPA filtered vacuum cleaners. Sent him some info plus additional stuff on fixatives and websites.

6. Sponsored a tour of the Unitech Laundry so personnel could see how their protective clothing is handled and their full-face respiratory equipment is cleaned and disinfected. Eleven Fluor and CH2MHill representatives were impressed with the facilities cleanliness, organization, and the laundering process. Key points from the tour were:

- Unitech contract to launder clothing and equipment is managed by Rick Wible of DOE.
- 100% of the laundry is surveyed on a moving conveyor to verify it meets the limits specified in the contract.
- All laundry is processed in a "closed loop". For example, PFP laundry is cleaned by itself, and then washing machines and dryers are cleaned and surveyed before another facility's laundry is processed. There is no facility garment mixing. This ensures each facility gets its only laundry back.
- Laundry personnel emphasized that radiological workers are responsible to check PPE to ensure it is in good shape prior to donning it. If the PPE is found damaged, facilities are responsible to take the PPE out of service and send it to the laundry, if it's repairable. The laundry is funded to make repairs.

7. Jerry taught three classes on glovebags to 8 CH2M and 16 FH RCTs as part of their continuing training. Provided tour of the ALARA Center to a manager from Argonne Labs. D. Ekstrom concerning products that are commonly used to fill the void space in packages of radioactive material. They are planning a future job that may require filling a tank located in F-Cell at T-plant. Recommended expandable foam and low-density grout (grout with lots of Styrofoam pellets mixed in). Told her to look at [www.instacote.com](http://www.instacote.com) and <http://www.ssescoinc.com/lightweight.html>. Forwarded lessons learned on foaming. See Attachments. Forwarded info on Nilfisk Explosion-Proof vacuum cleaner to M.Gerst, WM Engineering Manager.

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## FOR YOUR INFORMATION

1. The Health, Safety, & Security section of DOE has an email notification you can subscribe to to find out when new documents are issued. See <http://www.hss.energy.gov/infomgt/dns/ehdns.html> and select the documents that affect your job. While looking for something else, I found a paper "360 Degree Photography to Document, Train, and Orient Personnel for D&D". See <http://www5.hanford.gov/pdwdocs/fsd0001/osti/2003/I0036054.pdf> We haven't heard of anyone using this technology in the last few years and D&D Planners might want to consider the use of this technology. Also found an interesting document "Hanford Facility Dangerous Waste Permit". See [http://www.hanford.gov/docs/rl-91-28/rl91-28chp\\_04.htm#4.10](http://www.hanford.gov/docs/rl-91-28/rl91-28chp_04.htm#4.10) This document contains information about many of the Hanford facilities.

2. Last week's report discussed the PUREX Train and the eight very highly radioactive railcars containing processing equipment that were stored in an underground tunnel behind the PUREX facility. L. Zinsli

pointed out that the tunnel has branches and there are actually two tunnels. Tunnel 1 contains the eight railcars with the highest radiation levels and Tunnel #2 contains seventeen railcars. See <http://apdrmweb.ri.gov/rimvu/default.aspx?id=D0427650> for a 149 page report that describes how the tunnels are constructed, radiation levels, and what's loaded on each railcar. This report may not come up for personnel outside Hanford. If it doesn't, contact Waggoner who will attempt to email it.

3. (Lesson Learned on Sponge Blasting) One of the free magazines we get periodically is Architectural Coatings. In the June/July issue there was an article on the refurbishment of an old courthouse in West Virginia. There were multiple layers of lead-based paint on the ornate building with thicknesses up to 1/4". The process used to remove the paint without damaging the metal decorations was to blast the surface with sponges that had been dipped in an aluminum grit. Sponge-jet Inc of Portsmouth, NH made an abrasive from urethane sponge material and 80 grit aluminum oxide. They described it as "fast-cutting and aggressive with low rebound and low dust". The low-rebound characteristic allows blasting in close proximity to operating machinery. During impact, the sponges expand and contract, creating a scrubbing effect. The sponge material adds pliancy to cushion ricochet velocity, while the sponge porosity acts like a vacuum, trapping dust that would normally become airborne. Sponge blasting in the D&D environment is one of the available technologies that can be used to decontaminate or clean metal and bare or coated concrete. See <http://www.spongejet.com/> If you're trying to determine the best method of preparing a surface for paint or stripping coatings, recommend checking [www.surfacepreparation.com](http://www.surfacepreparation.com). These folks can provide information on all techniques and demonstrate their products.