

**From:** Waggoner, Larry O

**Sent:** Thursday, March 08, 2007 2:18 PM

**Subject:** ALARA Center Activities for Week of March 5, 2007

**Attachments:** Grouting at Oak Ridge.pdf; Roof peel.JPG; JITLL 07-008 GB Seam Failure.pdf; GM-80 Picture 002.jpg

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1. Forwarded a presentation from K. Funke of Oak Ridge to SNF personnel who are designing a vented hood for removing the Hose-in-Hose pumps and replacing their impellers. See Attachment. Forwarded a list of the currently approved vacuum cleaners for outside radiological work to R. Reeder of WCH. Provided names from the 2006 Nuclear News Buyer's Guide to PNNL Radcon concerning companies that manufacture encased lead shield plugs.
2. Provided a tour of the ALARA Center to 13 personnel from the D&D Sub Group from the Energy Facility Contractors Organization (EFCOG). They are looking at options on how they can have a place that D&D personnel can call when they need help. Decided that the Hanford ALARA Center would try and help and also gave them contact info for the ALARA Center at Savannah River. They formed a working group to further evaluate how they could have a D&D Help Desk and we will participate in the discussions. Forwarded the handout on the Evolution of the Hanford ALARA Center to Fluor personnel in England at the Sellafield Site.
3. INEEL Rad Engineer called needing the website for the EZ-Reacher Extension Tool. <http://arcoa.com/> They have to remove a small source from a lead pig and then replace it. PNNL called looking for info on a grab sampler that can be used to sample a tank that is about 15' deep. Recommended he look at <http://www.labsafety.com/search/samplers/34699/> Received a picture of the peeling paint on the roof of building 224UA Calcinations Facility in the 200 West Area. See attached photo. Contaminated paint chips are being found next to the building and it appears it's peeling off the walls and roof. Apparently, the external surfaces of the building were contaminated many years ago from adjacent buildings or from the 224UA Vent system. Initially, the plan was to sweep up the chips and paint the building with a fixative. The concern is: What's the best fixative? Recommended they contact R. Largent of Master-Lee Hanford at (509) 943-2949 who painted the 321 Building with polyurea a few years ago and provided a 15 year guarantee.
4. Forwarded a list of the skills we think a Glove Bag User needs to personnel at SNF for review. They are evaluating and will decide whether these skills meet their requirements and whether the ALARA Training Course should include different things that are applicable to the work they do. We estimate they will be ready for this training next week.
5. Met with Field Engineer B. Mews from WCH. He was interested in fixatives, cutting tools, HEPA Vent units and cut/puncture resistant gloves. Gave him a list of current fixatives used on site. He is looking at using the aerosol fixative "Capture Coating" sold by Encapsulation Technologies at [www.fogging.com](http://www.fogging.com) and purchasing smaller Dynafog units also sold by Encapsulation Technologies. The cutting tool he liked best was the battery powered 18v portable band saw sold by Stout Tools at <http://www.stouttool.com/>. It has a 2.5 inch throat and can cut pipes that are close to walls. Showed him the Abatement Technologies Vent units purchased by the WCH D&D folks in the 300 Area. He said they were small enough to lower down a hatch. Showed him the flow rate device sold by NFS/RPS that he could use to monitor his flow rate. Also told him about the 1000 CFM vent unit that NFSRPS is selling that has a programmable flow rate. The unit automatically maintains whatever flow rate is preset. See [www.nfsrps.com](http://www.nfsrps.com). This unit is so new, it might not be on their website yet. Contact John McDowell at (503) 881-3558. Showed him the HexArmor cut and puncture resistant gloves that many of the Fluor facilities are purchasing. See [www.hexarmor.com](http://www.hexarmor.com) to see videos and examples of all their gloves. FYI, Safety has recently issued a change to the Personal Protection Instruction to add several models of these gloves to the pre-approved list.

5.

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#### FOR YOUR INFORMATION

1. Larry returned from the Waste Management Conference where he and several other Hanford personnel gave presentations, held poster sessions, and participated in Panel Discussions. He attended as many presentations as time permitted and we expect to receive a CD with all the presentations in May. There were 165 vendor booths and brochures and videotapes were obtained from the ones that might be useful at Hanford. Here's some info from my notes. Once I receive the CD with the presentations I will forward them to appropriate personnel.

NOTES: At one presentation the discussion concerned the aging workforce at DOE and the need to document what we are doing so it isn't forgotten when the older personnel retire. DOE indicated they would be increasing the number of interns to try and fill future vacancies. Of the DOE Workforce, 1% of the workforce is under 30 years old and 11% is over 60 years old. The need for a safe, cost efficient, and compliant cleanup was included in several of the speeches made by DOE and Prime Contractors.

In addition, work will continue with a prioritized risk reduction plan so that the facilities that are the most risk to the public and the environment are placed in a safe condition and/or demolished first. Plan is for DOE to work with its industry partners to recognize professional competence and yield high performance. They think that working through the Energy Facility Contractors Organization is the best way to accomplish this partnership. Environmental Management reminded everyone to look at their revised website at [www.em.doe.gov](http://www.em.doe.gov).

The chairman of the NRC discussed the shortage of talent at all levels of the nuclear industry. It is an aging workforce and actions are being taken to recruit new talent into the industry through an intern program. This intern program will take 2 years and candidates will be rotated through the DOE Sites. When each part of the industry steals talent from other sectors, we aren't improving. Need to look at the skills gaps we have in the future and ensure we have people to fill the gaps. Delays in opening Yucca Mountain may cause a re- thinking about the recycling of spent nuclear fuel. Look at Human Performance Improvement to reduce errors.

There was a lot of discussion about RISK. Contractors need to establish a baseline plan to accomplish the work and then continuously look at ways to accelerate the plan. Focus on the critical path. Start with Incentive-Based contracts, choose the right team, and develop a "Going Out of Business" plan. Track manpower by name, plan for redistribution of utilities and plan for more work than you have budget. Need to look at each plan and identify significant uncertainties in scope and other critical areas to cost and schedule. Managers need to spend time in the field to ensure they understand what is being done and look for opportunities to be more efficient. Critical resources need to be identified and implement a retention plan.

Involve the workers in the decisions and share any rewards. Engage workers on safety. Talk to them, not at them. Consider frequent "tailgate" meetings. On critical work steps, emphasize training in mockups. Consider every incident as preventable. Include security personnel early in the remediation plans on facilities where security must be maintained during D&D. One method to help with planning is to conduct workshops that include old retired employees. Schedule work in 90 day increments. Use specialized equipment to reduce risk to workers. Work safe, hard and smart.

2. CH2M reported they had a problem with a seam failure on a glovebag while removing it. A grab air sample taken during this same period revealed 0.6 Derived Air Concentration (DAC). See attached Lesson Learned. Received a call from Rad Planner S. Doss later with information that CH2M was considering using negative ventilation on all future glovebag removals. Plan was to hold a vacuum cleaner suction hose up to the 40 CFM filter on the glovebag if a vacuum cleaner wasn't already connected to the glovebag.

CH2M already owns 2 Nilfisk vacuum cleaners with speed controllers. The speed controller could be set at 45% or less and that would ensure the air drawn through the filter was less than 40 CFM.

*Note: the Nilfisk is rated at 87 CFM with a new HEPA filter. 40 CFM is about 45% of 87 CFM. See [http://www.nfsrps.com/cat\\_air\\_instruments.html](http://www.nfsrps.com/cat_air_instruments.html) and the attached photo of the GM-80. This same website has the formulas to convert the velocity into the CFM needed for the system. We checked the GM-80 vacuum at the ALARA Center with a Kestel 1000 wind gauge and confirmed that setting the speed control at 45% does correspond to about 40 CFM.*

3. Anyone needing a small HEPA filtered vacuum cleaner should check out the Dustbuster vacuum cleaner at <http://allergybuyersclubshopping.com/dirttamer-handheld-vacuum-cleaners.html>. It has a flow rate of about 30 CFM. Not sure if it will pass the leak test by Vent & Balance but the company is sending a vacuum cleaner to test.



The manufacturer says that this unit draws about 30 CFM, has a rechargeable battery and the battery will run for about 12 minutes. It is also a wet/dry unit. Something to consider if you don't need a lot of flow rate.