

From: Eby, Jerald L

Sent: Friday, March 03, 2006 2:06 PM

Subject: ALARA Center Activities for the weeks of February 20th and February 27th, 2006

Attachments: Prelim PTZ70.ppt; February 2006 Activity Report.pdf; MW600SS BROCHURE COVER.doc; MW600SS BROCHURE REAR.doc

Please visit our web site at: <http://www.hanford.gov/rl/?page=974&parent=973/> This report covers the last two weeks because of the short 3 day week of February 20th.

1. Forwarded a package to Shawn Mellgren at WRAP on movable exhaust hoods and use of localized ventilation. He is looking for a way to prevent airborne contamination from drums removed from the WRAP gloveboxes and thinks localized ventilation is the best choice. Sometimes the inner lid that is installed in the drum before it is lowered gets cocked and a small portion of the contaminated contents of the drum become exposed. The drum then rolls about 6' where the outer lid is installed.

Attended mock up of the prefilter change out for 113-FT-202A at WRAP. The training is being performed on a filter bank located in the 200 West area that have not be previously used. See last weeks report about the filter bank. The personnel that will perform the change out at WRAP and RadCon spent some time with the housing cover and bag out/bag in sleeve. They then performed a change out using the purposed procedure. Notes and modifications were made to the procedure as the training was performed. On completion, it was suggested that the group perform the task one final time on the mock up prior to the actual job at WRAP.

2. Received call from ALARA Coordinator at INEEL concerning a problem they are going to have pumping out debris from a tank. Plan is to pump out the debris in a slurry through a hose that will have to be draped over the worker's shoulder and high gamma radiation levels may be present. In order to reduce the worker's dose they either need to shield the hose or the worker or both. They are aware of the Radishield shielding sold by Frham Safety but thought we might know of a better product. Looked up leaded aprons and vests but they only contain lead equivalent to 0.5mm or about 0.02". Found a website for leaded vinyl sheeting that comes in 0.5 or 1mm lead equivalent thickness that can be cut with scissors. It is available in rolls 24" or 48" wide in lengths from 1' to 100'. The hose could be wrapped in six layers on the 1mm thick vinyl in the area where it passes over the workers shoulder to give the equivalent of a half-value layer. The weight could be supported by tying off the hose to a support located above the tank. Price of the 1mm vinyl is ~\$55.00/ft2 which is higher than the Radishield but may be easier to install. See websites at: <http://www.atnucle.com/nuclear/shielding/leadvinyl.html> or www.frhamsafety.com. Frham stills sells the Radishield, it just disappeared from their website.

3. Earlier, our power point presentation on Cutting Techniques Used for D&D was forwarded to key D&D personnel for review and comment. At the suggestion of George Carter, we are adding information from Nitrocision on their Nitrojet cutting technique. The system pressurizes liquid Nitrogen to minus 240 degrees F and up to 60,000 psi. The high pressure stream both cuts and removes surface coatings, before returning to its gaseous state. There is no secondary waste and no mixed hazardous waste is created. It can also be used with flammable materials and those sensitive to explosion. Read about this technology at www.nitrocision.com. To see video clips of nitrocision cutting see: <http://www.nitrocision.com/appDemos.htm>.

4. Forwarded info on Cost-Benefit Analysis to S. Gunnink. Referred him to HNF-3325, FDH Radiological Design Review Guidelines and forwarded him a list of the Person-rem values currently used at Hanford. Fluor Hanford is currently using \$25,000 per person-rem on most projects. Forwarded Section 3 of the Industrial Ventilation Manual to WRAP and SWSD Radcon. Wrap is evaluating the use of ventilation to capture loose contamination on drum lids and SWSD is concerned about fume hood ventilation at WESF. The Industrial Ventilation Manual can be obtained by calling the Library of Congress at (513) 742-2020 for about \$75.00.

5. Groundwater asked for a source of information on Technetium99. Referred them to the Radiochemistry Society website at <http://www.radiochemistry.org/index.shtml>. This is a good site to find info on all isotopes. Recommended a change to a PFP drawing that had the wrong HEPA filter attached to a Radcon Poly Bottle.

6. An engineer working for WCH called looking for info on who makes portable HEPA filtered vent units that are rated at 25,000-30,000 cfm or greater. They are going to attach the unit to buildings in the 300 Area undergoing D&D to draw a slight negative pressure on each building. Their general specs call for a skid or trailer mounted, HEPA filtered system with up and downstream sampling ports. Referred them to the rep from NFS/RPS that was on site looking at vent problems at WRAP and Permacon buildings they had sold to T Plant. NFS/RPS will put a proposal together. U Plant D&D is also considering a unit this size to draw a slight negative on the U Plant canyon during work in the canyon. They will evaluate the proposal that WCH gets. Another unit WCH is looking at is made by IONEX.

7. Attended meeting at 222-S labs on shielding of the DMWSA 82/83 drum storage areas. The environmental TLD in an adjacent laundry issue station has had noticeable readings and the facility would like to reduce that exposure. From the meeting, the facility is going to move the position of the higher radiation source drums away from the laundry station, within the confines of the four DMWSA's. Depending on the results of the drum movement, the next suggestion would be to shield the individual drum that are contributing to the exposure. One suggestion for shield was a drum shielding kit from Radishield, sold by Innovative Industrial Solution, web site: www.i-i-s.net. Another company with a shield package is Frham Safety Products, web site: www.frhamsafety.com.

8. The Center talked to Randy Salsa, Fluor Construction Manager in Texas, and Larry Peterson, Richland FFS, in a conference call this week. Randy is going to be giving a presentation to a potential Fluor customer (BNG) from England this Wednesday and he want to get a better feel about the ALARA Center for his presentation. Larry Waggoner had sent Larry Peterson some presentations (CDs) last week and FFS is forwarding the latest one, used at the FCOG meeting in D.C. by Larry, to Randy. Jerry sent Larry Peterson a couple of other items for the presentation.

FOR YOUR INFORMATION

1. The Center was talking to one of temporary shielding vendor's this week. Per the conversation, the vendor stated that the price on manufactured temporary had gone up significantly recently do to the high volume of shielding going to China and Russia. For the folks at the Hanford site, please contact the Center for possible sources of excessed shielding on site, before purchasing new shielding. If your group desires to purchase new shielding, the Center recommends your purchase be made soon, as the price will probably continue to rise, depending on the foreign needs.

2. In the month of January, three type B safety incidents occurred. Read about them at http://www.eh.doe.gov/paa/safety_advisory.html The American Nuclear Society is sponsoring a Topical meeting of the Radiation Protection and Shielding Division between April 3-6, 2006 at Carlsbad New Mexico. Read about it at www.ans-rpsw-carlsbad.com. The new Fluor Hanford Radiological Risk Screening Form is now available on sit forms. It's number is A-6003-838.

3. The ALARA Center held the monthly Site ALARA meeting at 2420 Stevens on Thursday, March 2nd at 2:00. This meeting in the recent past has been held at the ALARA Center, but at the request of a number of attendees, the meeting was moved back to 2320 Stevens. Meetings are the first Thursday of each month and is open to any site personnel to discuss ALARA in action at Hanford.

VENDOR CORNER

1. EVEREST VIT, a robotic and video camera company was at the ALARA Center, February 23, from 9:00 to 1:00. Nick Clyma has been on site a number of times and many of the EVEREST VIT units are in operation at Hanford. Nick's company has a number of video cameras, robotics or remote operated equipment. See attached pictures of the new camera built for Tank Farms to fit down 3" risers that was supplied by Everest VIT. Web site: www.everestvit.com
2. 3M Rep stopped by the Center to discuss adhesives and other issues. The Rep stated that 3M is still working on a good replacement to the hair spray used to fix contamination to PPE at PFP during personnel egress. They will be maintaining contact with the Center and PFP personnel on 3M's progress. Web site : www.mmm.com
3. John McDonnell of NFSRPS visited the Center. Web site: www.nfsrps.com . See entry #6 above on ventilation needs at 300 area work, T- plant, WRAP and U- plant that NFS/RPS are giving assistances.
4. The ALARA Center was asked a few years ago by PFP to find a manufacturer that makes a portable heat sealer that could be used to heat seal the bag out sleeves from glovebags. Plan was that if PFP could get a reliable heat seal they could cut down the middle of the heat seal without wearing respiratory equipment each time a bag-out was made. The attachments above describe a unit that is in use in England as well as other DOE sites. If you're interested in this unit, contact Rory MacKenzie at; Industrial Automation Services, Inc. / Stanelco phone: (602) 859-2949 or e-mail: Rory MacKenzie [mailto:rory@iasaz.com].
5. Nilfisk, web site: www.pa.nilfisk-advance.com sent the ALARA Center a new HEPA filtered vacuum cleaner. The unit, IVT 1000 CR Safe-pak has some unique features. The collection drum has a HEPA filter built-in the drum, making it a collection drum that can be simply replaced, saving the rest of the vacuum cleaner for future use. The unit upper portion and exhaust motor have its own built-in UPLA or HEPA filter. Original built for pharmaceutical/medical use, it has been built to control contaminates. The site Vent & Balance Group are presently looking at the unit for future aerosol testing. The unit has a 72 CFM maximum suction flow rate and a 3.25 gallon capacity. Stop by the Center and take a look.

Jerry Eby

ALARA Center of Technology
509-372-8961 fax 509-376-7717

Larry Waggoner

ALARA Center of Technology
509-376-0818 fax 509-376-7717