

From: Eby, Jerald L

Sent: Friday, January 20, 2006 1:25 PM

Subject: ALARA Center Activities for the Weeks of January 9 and 16, 2006

Attachments: Catch Basin.jpg; shield blocks.jpg; B512045tri-tool.jpg; Clear IVT Safe-Pak.jpg
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1. Discussed upcoming work in 300 Area with WCH Radcon. They have vent ducting in the 313 building that has Uranium contamination and piping above the ceiling in Building 3706 that has Pu. Plan is to characterize the vent ducting before removal. Faxed brochures on small fogging devices and recommended looking at the www.fogging.com website. Discussed other techniques such as foaming the pipe, connecting ventilation up/down stream and use of glovebags. Recommended he review old Hanford photos and documents at <http://www2.hanford.gov/DDRS/index.cfm/> Click on "Simple Search" and then type what you're looking for. For example "Building 313". Select the number and then hit "Search".

Forwarded info on plasma arc cutting, circular saws and large hack saws to WCH work planner at 100N Area. Forwarded info on an adjustable Saws-All made by Porter-Cable to PFP D&D personnel. Recommended they take the "Virtual Tour" at <http://www.porter-cable.com/index.asp?e=547&p=4822> Forward list of fixatives and communication vendors to WCH Rad Engineer. WCH will organize a tour to look at tools/equipment at the ALARA Center. Forwarded photo of a conical-shaped "catch basin" sold by Lancs Industries to catch liquid. WRAP wants to use it as a scoop on a vacuum cleaner hose to collect any airborne contamination created during soldering/welding. See attached photo.

Forwarded message to ALARA Coordinators concerning the need for lead blankets for upcoming work by WCH. D&D Radcon offered half of a pallet of blankets. Contact Greg Gibbons at 373-4947 if you have shielding to loan. Gave 9 pair of NOMEX , website: www.dupont.com/Nomex/, Coveralls and booties to WCH Field Engineer. They will use them for "Hot Work". These coveralls had been excessed by West Valley DOE Site. Received request for advice from the Weapons Test Site in Las Vegas. They want to cocoon several contaminated railcars in a remote part of the Nevada desert rather than move them to location for dismantling. Recommended they look at Polymeric Barrier System sealant sold by Bartlett Nuclear Services, if they are going to be stored temporarily. If the intent is leave them in place for many years, recommended they talk to vendors that spray polyurethane and polyurea coatings. The units could be wrapped in shrink wrap and then sealed with one of these coatings.

WCH personnel toured the ALARA Center and had three areas of primary interest. They looked at polyurethane glovebags that remain flexible in cold weather, vacuum cleaners with collector drums installed in the suction hose and tools/hot taps for cutting piping.

2. Loaned Pacific Eco Solutions (PECOS) 5 gallons of TLC Strip coat latex strippable decontamination paint, website; www.bartlettinc.com . They have been size reducing hose-in-a-hose pieces from Tank Farms and encountered liquids that spread high levels of contamination. They will test the product and then decide whether to apply it in their contaminated work area. In addition, loaned them a N-1000 nibbler for a day to test on clean stainless steel. They have several glove boxes from PNNL that need to be size reduced and are concerned that plasma arc cutting may not be the best choice.

3. A Safety Engineer from K-Basin contacted the Center to borrow one of our manikins for a demonstration at K-Basins and if the Center had access to any PPE that has a penetration in the material for facilitating fall protection to be worn inside the PPE. At the present, the Center has found no PPE on site with the penetration sleeve built into the garment. The manikin was sent to K-Basins for the demo.

4. Provided info on frisking caves and booths to personnel working on recovery of waste drums from the burial grounds. Recommended talking to Lanc's Industries or NFS/RPS on the frisking caves and

obtaining concrete "ecology" blocks to construct frisking booths. The 2' X 2' X 6' blocks cost about \$40.00 each and can be stacked three high.

5. Received from Lancs Industries some sample booties and over shoes for the waste retrieval project. Gave the samples to the group for evaluation. Web site: www.lancsindustries.com

6. Received request from FFTF for help in finding a tool that could be used to punch or drill holes in 6" stainless steel pipes. Two holes are needed in 110 closed end pipes for venting and draining. Looked at tools that punch holes but couldn't find a tool that would go through the 0.138" pipe wall. Recommended using a glovebag and a drill press or a laser.

7. Forwarded photo of the bottom section of the new Nilfisk, website: www.pa.nilfisk-advance.com, IVT Safe-Pak Vacuum Cleaner to key personnel and Vent & Balance. The lower section of the prototype vacuum cleaner is made from clear plastic so workers can see the HEPA filter and collection bag. Based on the input from key personnel, recommended to Nilfisk that the clear plastic version be made an option for personnel who want to purchase this unit. They could either order it in clear plastic or in a solid plastic or equivalent material. Plan would be to use the vacuum cleaner until it's full, shut it off, separate the motor section from the disposable lower section, reinstall a new lower section that has been tested by Vent & Balance and continue work. The lower section would then be discarded as rad, asbestos, or lead waste.

8. Forwarded the MSDS and test results from PFP on BoeLube lubricant, website: www.orelube.com, to WCH Rad Engineer and work planner. Test cuts made at the ALARA Center revealed that using the lubricant to cool the blade of cutting tools could double the number of cuts on stainless steel piping before the blade was dull. This lubricant is sold by CS Unitec at www.csunitec.com or (800) 700-5919. Hanford MSDS Numbers are 010494, 025237, 062970, 063256, 063257, and 063255. Test results from the PFP chemist revealed the BoeLube products were compatible with the acid compounds found at PFP. Forwarded info on fixatives and a report on polyurea to E. Lloyd who is planning the demolition of Building 232-Z. The polyurea report is available on the RMIS database, Accession Number D8660842, Document #RPP-7806. Initial plans are to demolish the concrete block building with an excavator and use multiple misters and fixatives to confine any spread of contamination. Misters are being purchased from Fogco at <http://www.mrdrip.com/fogco.htm> and Microcool at <http://www.microcool.com/>

9. Loaned our copy of the Industrial Ventilation Manual to engineer working on the Canyon Disposition Initiative. He said they were looking at using a containment with positive ventilation, similar to what was done at Building 244-AR in the U Plant Canyon. Forwarded a power point presentation showing the steps taken to inflate containment sections and core drill through the 5' thick cover blocks. Installing containment enclosures by inflating and then putting the scaffolding inside saved money, time and person-rem.

LESSONS LEARNED

A few months ago several Hanford personnel visited the PECOS facility and watched workers apply chemicals from EAI, website: www.eai-inc.com, to a contaminated concrete floor that had been contaminated with nitric acid. The chemicals were applied with a foam sprayer and then vacuumed up a short time later. The chemicals were supposed to float the contamination to the surface. After vacuuming, surveys showed the contaminated concrete floor had been decontaminated. Later, it was discovered the concrete floor was contaminated again, probably from leeching of contamination out of the concrete. Workers rented a Hotsy, web site: www.cbhotsey.com, pressure washer and purchased the Hotsy chemicals made for cleaning concrete. After the floor was decontaminated, it was painted with epoxy paint to seal the contamination.

Discussed decontamination methods with Pacific Eco-Solutions Radcon. They had a metal box contaminated to 1.2 Million dpm/100cm². After 3 hours of decontamination they reduced the levels to

300 thousand dpm/100cm². They then sprayed Tagaway on the box and immediately wiped it off. Surveys revealed the activity had been reduced from 300,000 to 20,000 dpm/100cm². This product is biodegradable, non-flammable and is used to remove graffiti from concrete, metal, railroad cars, glass, and wood. If you're having problems trying to decontaminate surfaces, you might want to give Tagaway or Taginator a try. Tagaway is for painted or smooth surfaces and Taginator is for rough or concrete, unpainted surfaces. Contact Columbia Basin Hotsy at www.cbhotsy or call (509) 943-6022 to obtain a sample. The Center now has limited samples of the products available.

FOR YOUR INFORMATION

1. Forwarded the following websites of reports that concern the D&D of gloveboxes to PFP personnel: Operating Experience with Nuclear Glove box Transfer Systems at Argonne: <http://www.osti.gov/bridge/servlets/purl/766299-dhJ6FV/webviewable/766299.pdf> and D&D of Sixty-One Plutonium Gloveboxes at Argonne, Building 212: <http://www.osti.gov/bridge/servlets/purl/426980-7nKgwi/webviewable/426980.pdf>
2. Operating Summary OE 2005-015 has just been issued and contains an article about hidden electrical hazards encountered during D&D activities. It can be found at website: <http://www.eh.doe.gov/paa/oesummary/oesummary2005/oe2005-15.pdf>
3. THE DOE Annual Report on Occupational Radiation Exposure can be read at: <http://www.eh.doe.gov/rem/annual/annual04.htm> Section 4 concerns ALARA and there are several articles and pictures submitted by Hanford contractors.

VENDORS CORNER

Heatherly Dukes and Dick Downard from Unitech Services, website: www.unitech.ws, made two presentations outlining the services Unitech could provide to Hanford and showed protective clothing and heat stress equipment marketed by their company. Unitech owns the laundry on Horn Rapids and sells a lot of the products used in the nuclear industry. Some of the services that could be provided to Hanford include decontamination of equipment and rental of HEPA filtered vent systems and vacuums plus other equipment used for radiological work. Discussion included the success that Savannah River has had reducing heat stress and their respiratory protection program. Protech 2000 protective clothing was shown and it can be either purchased or rented, as needed. About 34 Hanford personnel attended the presentations.

Tri-Tool, website: www.tritool.com, clamp shell cutters have been used on site for many years. The Center found a picture of a clamp shell cutter end prepping pipe at the WTP project in December 2005. A good picture of work in progress. See attached B512045tri-tool.

Tom Bester from Safety and Supply, website: www.safetyandsupply.com, visited the Center with a modified Tyvek hood from Lakeland with a longer bib for PFP to wear over their respiratory equipment to minimize the radioactive contamination on the persons regulator and face piece assembly during work. Tom met with PFP and gave a sample of the modified hood for review by PFP.

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