

From: Waggoner, Larry O
Sent: Thursday, April 06, 2006 12:41 PM
Subject: ALARA Center Activities for Week of April 3, 2006

Attachments: Decon Tech Page 1.jpg; Decon Tech Page 2.jpg; Decon Tech Page 3.jpg; fixative 8.doc

Visit our website at <http://www.hanford.gov/rl/?page=974&parent=973>

NOTE: Facilities that still use Euroclean UZ 948 vacuum cleaners need to read item 4 below. You may need to remove your vacuum cleaner from service, since the Underwriters Lab listing has been pulled.

1. Received call from WCH looking for twelve 24" square HEPA filters to outfit their new Ionex 20,000 CFM portable vent system. Ionex can't get HEPA filters for several weeks. Recommended they contact the warehouse at Building 2101-M and determine if PFP or another facility has HEPA filters on hand they would be willing to loan. (They have 52 filters in storage). Another group of WCH from 100N visited the Center and looked at how 24" square HEPA filters are constructed. They have to partially remove a HEPA filter and then cut a sample out and have it analyzed to confirm their waste stream. Plan is to use nippers to cut the stainless steel screen.

2. Talked to Dave Jeppson concerning the application of expandable foam in a ten foot section of 3' diameter duct that is located underground from the 232-Z building at PFP. The rest of the duct will be filled with grout but they wanted the last ten feet that will press against a plastic cover to be less weight. Their concern is the expandable foam will collapse if it's not exposed to air and return to the liquid chemicals. Recommended he talk to Rick Largent of Master-Lee Hanford (943-2949) and look at www.instacote.com on the internet. Recommended that if he can't get the foam to work to mix Styrofoam pellets with the grout. This is often done at facilities that need to fill the void space in their waste containers but have to pay the burial ground by the pound. Styrofoam + grout = Lightweight Grout. Also recommended that he look at the Website for the Concrete Sawing and Drillers Assn at www.cstda.org. Click on "Concrete Openings Magazine" and look at back issues. Recommend anyone involved with concrete sign up for the **free** subscription. It's full of info that D&D people can use and the magazine has a lot more info than the website.

3. Last week I requested help from all contractors to update the list of fixatives used at Hanford to control contamination spread. The list has been updated and new fixatives added. See attachment on fixatives. FH personnel from K Basins visited the ALARA Center to discuss decontamination techniques for external and internal surfaces of piping and tools. Referred them to 4 websites: <http://www.osti.gov/bridge/servlets/purl/10157678-yUQL4E/webviewable/10157678.pdf> Chapter (9); <http://www.osti.gov/bridge/servlets/purl/8239-A64q4z/webviewable/8239.pdf>; <http://www.nea.fr/html/rwm/reports/1999/decontec.pdf>; and <http://www.osti.gov/bridge/servlets/purl/565632-1abeKG/webviewable/565632.pdf>. Copied sections of the "RadWaste Solutions 2006 Buyers Guide" and the Buyer's Guide in the Nuclear Plant Journal that listed all vendors that sell Decontamination Chemicals, Equipment & Services. They can determine what services they want to be accomplished by an off-site vendor and use the Buyer's Guide to contact each company or review their website. Provided them with three tables from DOE/EM-0142P, Decommissioning Handbook. See attached 3 pages. These Tables provide recommendations on the best techniques for decontamination.

4. Received call from WSCF personnel looking for info on changing out the HEPA filter on a Euroclean UZ-948 HEPA filtered vacuum cleaner. They have a "new" HEPA filter but it has been stored in a connex box for several years instead of an approved climate-controlled storage area, which is required for larger building HEPA ventilation filters. Recommended they contact the STA for HEPA filters (Pat O'Brien) and determine whether the filter is useable. I reminded them that this model vacuum cleaner has electrical problems that were discovered by the electrical code committee a few years ago. The wiring needs to be upgraded and the 15 amp plug changed to a 30 amp plug. We discussed the OSHA requirement that

requires the vacuum cleaner to be tested by a Nationally Recognized Testing Lab. They inspected their vacuum cleaner and found a U/L label but when they called the company they were informed the U/L listing was no longer valid. The same unit at the ALARA center contains no markings. Looks like the best solution is to purchase a new NRTL listed vacuum cleaner and dispose of the Euroclean UZ-948. Forwarded them brochures on Nilfisk vacuum cleaners and a copy of the GSA contract we have with Nilfisk. See www.nilfisk-advance.com They can buy directly from Nilfisk without going through an industrial supply vendor that adds about \$400 to the cost to handle the paperwork.

5. M. Haass from WCH called with questions on obtaining a glovebag to inspect containers of Pu recovered from a burial ground North of the 300 Area. Referred them to Lanc's Industries at www.lancsind@msn.com and recommended they consider the LI-301 Dog House. Offered to supply them a 40 CFM HEPA filter and a metal waste sleeve that had been donated to the ALARA Center. S. Brim from WCH visited the ALARA Center to inspect HEPA filtered vacuum cleaners and portable ventilation units. He took pictures and we disassembled several units that WCH purchases.

6. PFP personnel stopped and took measurements of the 1,000 CFM HEPA filters we have in stock. Last week they had problems with airborne radioactivity and hazardous air samples taken during plasma arc cutting of access holes into a stainless steel tank. They are looking at ways to improve their ventilation system and using a 1,000 CFM HEPA filter as a prefilter is one of their options. Talked to NFS/RPS rep and they said they are working with PFP to install a prefilter that has filter media sized so that it removes the larger airborne particulate and provides less restriction on the flow. They are waiting on info from PFP as to the size of the airborne debris particles. Forwarded info on plasma arc cutting to NFS/RPS to help them help PFP.

7. Held PHMC ALARA Council meeting for April. Showed ALARA Coordinators the hot taps on display including a new unit made by Ridgid. In addition, showed them the new Nilfisk vacuum cleaner that has a disposable bottom with its own HEPA filter.

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FOR YOUR INFORMATION

1. While looking for info on Plasma Arc Cutting, I found the following documents:
Application of Metal Cutting Techniques in Tasks Performed in Radioactive Environments;
<http://www.osti.gov/bridge/servlets/purl/473994-E9yPWg/webviewable/473994.pdf>
Dismantling Techniques; <http://www.osti.gov/bridge/purl.cover.jsp?purl=/656734-E5dgYh/webviewable/>
Technical Assessment of Dust Suppression Techniques Applied during Structural Demolition;
<http://www.osti.gov/bridge/servlets/purl/952-8612pD/webviewable/952.pdf>

2. Found an interesting catalog on Industrial Hose and Ducting. Read it at:
<http://www.hitechduravent.com/products/catalog.php> If you're lifting waste drums, see the catalog at <http://www.liftomatic.com/>

News from Savannah River ALARA Center : Their website is www.srs.gov/general/programs/alara
Heatherly Dukes with Unitech Services provided info on the EPRI developed DFD and DFDX decontamination processes designed for decommissioning applications. A dilute fluoroboric solution not only removes scale and buildup but also removes 5-20 microns of the base metal during the decontamination process. The fluoroboric acid does not create a chromium film like other acids such as nitric or sulphuric acids. The DFD process has been used at several commercial plants to free release areas. They claim it works well with Transuranics too. The DFDX process uses an electrochemical ion exchange process to create a metallic waste. It has been used successfully in Europe. Contact

Heatherly Dukes at (803) 541-7656. SRS issued a memorandum describing how to secure the tank on a Nilfisk GM-625 vacuum cleaner so the tank isn't accidentally lowered. Several Hanford facilities have purchased these same models. Contact the ALARA Center if you own a GM-625 and want to see how SRS modifies the vacuum cleaner to make them safer.