From: Eby, Jerald L
Sent: Friday, April 01, 2005 2:22 PM
Subject: ALARA Center Activities for Week of March 28, 2005

Attachments: ORSS3.jpg; ORSS4.jpg; icmcrawler.jpg
Visit our Center website at: www.hanford.gov/alara/

1. Gave a tour of the ALARA Center to seven nuclear process operators from CH2M Hill as part of their initial three week training class. Gave a presentation of an operation performed by CH2M Hill at the 244AR canyon. The main emphases was the installation of the containment tent using positive pressure from outside the facility, using a long pass way and four separate work enclosures. The job was completed successfully. CH2M Hill presented an AMW class to RadCon Planners at the Center training area.

CH2M Hill Engineer asked for info on vendors that could fabricate a tunnel that could be used to get workers through a tank farm. The tunnel would have a positive air pressure so workers would always breathe "clean air. Recommended he watch the videotape put out by Inflatable Abatements and provided a photo of the Lanc's Industries tent being inflated during installation at 244-AR. An access tunnel will get warm in summer and will have to be secured or it will blow away.
Received request for info on the "hose barn" temporary shielding that CH2M Hill uses to reduce dose rates from above ground transfer hoses. Referred him to Bob Brown at (509) 372-2932, who developed interlocking concrete shielding and lead/antimony hose barns that were used to shield the hose. Units were "U" shaped so the entire weight of the shielding was on the ground and no weight was placed on the hose. Info on these products can be found at www.nuclearlead.com

2. Assisted Ground Water RadCon and Operations in designing a glove bag for pulling of well casing, PFP area. This is a continuation from the AJHA meeting that the Center attended last week. Gave the RadCon first line a Lancs catalog, web site: www.lancsindustries.com , to assist in the design of the containment. Ground water group returned for glove bag piece. The Center occasionally receives from the site unused glove bags which are cannibalized for parts (glove sleeves, smear boxes, access sleeves and etc.), which in turn are given to projects needing extra pieces for their glove bags as add-ons. Ground water RadCon returned to the Center for information on HEPA filtered exhauster. Gave out brochures on the SP-125, a 190 c.f.m. unit by NFS/RPS, web site: www.nrfrps.com and ventilation accessories as so distributed by NFS/RPS.

Provided copy of Trumpf Nibbler catalog to PFP Engineering. They are unable to reach all areas during decontamination of some gloveboxes. Plan is to size-reduce these units using nibblers. Operators will be trained at the ALARA Center on how the nibblers are used, maintained and the work practices needed to dismantle the gloveboxes.

PFP Rad Engineering contacted the ALARA Center looking for better shoe covers as they are about to enter areas that have much higher contamination levels. Referred them to Marynn Safety who represents several protective clothing companies. See www.marynn.com . Received a chart showing the Moisture Vapor Transmission Rates of OREX protective clothing compared to Tyvek and the cotton-blend protective clothing worn at Hanford. The chart shows the standard OREX clothing is more "breathable" than the other products. About 50% of the commercial reactors have either switched to the OREX clothing or have it in limited use. Web site: www.Orex.com .

3. Bechtel HP stopped by the Center looking for an attachment of the small HEPA filter to a glove bag. Show the HP the attachment process the Center teaches in the Basic Glove Bag Class #020749 and gave him a sample of the attachment. Also gave the HP information on ordering 2 CFM HEPA filters and other material from Lancs Industries, associated with glove bags.. Web site: www.lancsindustries.com . Bechtel was also looking for an adhesive that will work well with rubber. The Center suggested using

ABATIX Heavy Duty Adhesive Spray, by Abatix Environmental Corp, web site: www.ABATIX.com . The Product listing number is AMRLMH-17.

4. Met with Energy Northwest person attending the remote camera demonstration and discussed radiation-hardened cameras in use at Hanford. Contacted security and obtained the name of a person they consider the "expert" on radiation hardened cameras. Energy Northwest is trying to expand their camera system to reduce the number of entries by personnel into radiation and high radiation areas.

FOR YOUR INFORMATION

1. In the past, the Center has received a number of articles from Fluor Hanford personnel that were forwarded to you via this weekly report. The Center appreciates the assistances in finding new products, tools and processes from folks interested in completing our mission here at Hanford.

2. In Waggoner's trip report from the Waste Management Conference he discussed a presentation on decontaminating stainless steel and the successful removal of fixed and removable contamination using a gel and applying an electrical charge. U-Plant D&D personnel were interested in this technology so recommended reading the report at http://www.osti.gov/bridge/servlets/purl/8239-A64q4z/webviewable/8239.pdf

3. Last weeks report discussed an article in the Health Physics Journal on "Radiation Shielding Technology". An electronic copy of this document can be found at http://ww2.mne.ksu.edu/~jks/ Click on "Recent Papers" and then "Radiation Shielding".

4. PNNL has two Eberline floor monitors they no longer need. Anyone who might be interested can contact Jenny Christensen at 376-3155.

VENDOR INFORMATION

1. The Center attended an actual decontamination by Intelagard, who has a product used to decontaminate large areas and equipment. It is a compressed Air Foam System and has been used successfully at race tracks, by the military, by DOE (Rocky Flats and Los Alamos) and to protect homes from forest fires. The Hanford site facility being deconned had a large concrete floor contaminated to 30K dpm, Cesium and Cobalt and dried nitric acid. They applied a foam sprayed on concrete, brushed the foam into the surface and then rinsed the area that pulled the contaminates out, that had seeped into the pores of the concrete up to ~2" in depth. Removal of the foam/rinse was by a HEPA filtered vacuum cleaner. Surveys of the concrete floor after one application showed activity <1000 dpm. The foam/rinse is not hazardous and the end waste stream is dependant on the contaminates in the concrete.
The foam/rinse chemical has been developed by EAI Government Services, web site: www.eai-inc.com . Intelagard, the product applicator, web site: http://intelagard.com/sparkplug/sites/intelagard/section.cfm?id=4 .The application equipment and associate material can be purchased from National Safety, web site: www.nationalsafetyinc.com , or (509)-670-9985. Photos of the concrete floor decon will be available at the Center in a couple of weeks. One of the IntelaGard applicator units will be placed in the Center, in the near future.

2. Everest VIT (miniature cameras, remote operated cameras, and robotics) held a two day Demonstration at the Center. Web site: www.everestvit.com The Demo was well attended by a number of Hanford Site organizations. One of the new remote operated crawler/ samplers that has been developed by Everest VIT for CH2M Hill tank inspection is shown on the attached two pictures. PFP personnel show an interest in the same crawler/sampler. Everest VIT will be leaving a remote operated miniature camera at the Center for display.

3. ICM, International Climbing Machines will be at the Center, for a demo of the ICM wall walker on Monday, April 4th, 1:00 to 3:00. Website: www.icmachines.com. See attached photo of the wall walker.

LESSONS LEARNED:

Oak Ridge used the diamond wire cutting technique at their New Hydrofracture Facility to cut a 6' X 9' hole in a hot cell wall for easier access during D&D. It worked remarkable well. The one draw back was having to make the cell entry to establish the pulley systems. Cells were highly contaminated and they decontaminated and applied strippable paint in the cell before cutting. Getting the wire cutting equipment set up was the longest portion of time for the project. Once the cuts started, they went fairly fast. Another draw back was the large amount of contaminated water used for cooling the wire during cutting that had to be collected. Airborne contamination was not much of a problem. After the hole was cut, the hot cell was no longer a Confined Space. For further info, contact Myra Long at email longmp1@bechteljacobs.org

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