

Fluor Hanford ALARA Center and D&D Knowledge Management Hotline Activities for Week of July 21 & 28, 2008

ALARA Center Activities and Information

1. We revised the ALARA Center List of Fixatives to include roof coatings being used at other DOE Sites and concrete floor and wall coatings. See Attached list. In addition, we added information on how fixatives are used. We found a website for a Glossary of Nuclear Science Terms. It is based on Radioactive Decay and contains animations showing each decay reaction. Click on the atom at:
<http://ie.lbl.gov/education/glossary/glossaryf.htm>

2. New Product: GE Inspection Technologies has developed a small video probe that is being used to inspect gearboxes and other components located 200 feet above the ground in the wind farms located outside Hanford. Workers needed to inspect the inside of the fan's components and wanted lightweight equipment to carry up the long ladder. See this product at <http://www.geinspectiontechnologies.com/en/products/rvi/vp/xlgo/index.html> The US Navy is also interested in looking inside jet aircraft engines. This unit would be useful in looking inside HEPA filter housings to accomplish visual inspections and for performing other inspections.

3. WCH needs a portable shielded booth for surveying people and counting smears. Recommended they obtain concrete "Ecology Blocks" from Central Premix and stand them three-high. As it turns out, they were already using the Ecology blocks and were looking for something that was more mobile. Recommended the modular plastic blocks that are sold by NFS/RPS or set up a conex box as a survey/counting room. The conex box could have a metal framework with brackets to hang lead blankets. See http://www.falconstorage.com/products/portable_buildings

4. Groundwater engineers stopped and looked at our available hand tools and glovebags. They need to cut the top from a 5' diameter resin catch tank made from fiberglass. We loaned them a cast cutter to test. This tool should cut the fiberglass and be less likely to cut the glovebag. The cast cutter blade vibrates and very slowly turns so there should be less spread of contamination during cutting. The engineers will sketch the glovebag and get a delivery and cost estimate from the Plastic Shop and Lanc's Industries.

5. Received the latest edition of DOE Operating Summaries. There is an article on a Uranium Fire at Y-12 at Oak Ridge. See http://www.hss.energy.gov/csa/analysis/oesummary/oesummary2008/OES_2008-06.pdf

6. The Center provided support to 105 K East Radiological Control by reviewing ALARA Management Worksheets and Work Instructions for 105KE superstructure D&D. The documents are still in draft and the work plan not yet finalized.

7. Forwarded a List of Shielding Tables to K Basins Rad Engineer. They are going to use a portable shield wall to reduce worker dose when they grout waste drums. They are constructing a rack and plan to hang lead sheets that have a plastic coating.
8. Forwarded photos of a clam-shell device used to recover corroded drums to Savannah River DOE site. They are uncovering drums that are in poor condition due to corrosion and want to evaluate the method used at Hanford.
9. Received a request for input into a project LLNL is doing to provide advice on controlling airborne contamination should a radioactive device be exploded in New York City Subway Tunnels. We provided suggestions on using a water mist, ventilation and using asbestos abatement contractors to install containment devices. We also included a "Position Statement" from the Health Physics Society on "Guidance for Protective Actions Following a Radiological Terrorist Event".

D&D Hotline Activities and Information

1. D&D of Hanford's K Basin Continues. Workers in protective clothing and respirators are using an excavator and shear to tear down the basin's ceiling and walls. Dust and contamination are being suppressed by a fine water mist sprayed over the work area by fog cannons and fire hoses. In the first picture above, the water tank on the back of the excavator supplies water to a mister located near the end effector. In addition, water is sprayed from a fire hose so that it falls like rain in the work area. The fog cannon sprays a column of mist up to 164'.
2. Anyone considering the use of robotic devices should check out PNNL's Mechanical Solutions website at <http://mechanical.pnl.gov/projects/#past>. The website has information about many of the robots used in the nuclear industry.
3. Forwarded info on spark arrestors to K Basins Rad Engineer and work planner. Recommended they purchase or manufacture a separator drum that will separate sparks from the air stream. Two WCH Radcon personnel toured the ALARA Center as part of their continuing education program.
4. K Basins contacted the ALARA Center to discuss tools to cut openings into a carbon steel tank with 3/8" walls. Discussed our metal cutting circular saw and nibblers. They decided to purchase an N-1000 Trumpf nibbler. See <http://www.trumpf-powertools.com/132.index.html>

Contacts

Visit us at the Fluor Hanford ALARA Center; we are located on the Hanford site at 2101M/200E/226. We will do our best to help you with your radiological engineering, ALARA, and D&D challenges. You can also send us questions, comments, and your lessons learned via e-mail or you can contact us by phone. Contact information is below.

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