SRS ALARA CENTER (AC)

Engineered Solutions for Radiological, Safety & Industrial Hygiene Applications.

FEBRUARY 2011 ACTIVITY REPORT

ASSISTANCE, RESEARCH, AND TOURS

The external SRS ALARA Center website is posted at www.srs.gov/general/programs/alara/alara_center.htm

The internal SRS ALARA Center website is available in InSite at the ESH&QA Regulatory and Radiological Technologies web-site. www.srs.gov/general/programs/alara/

The Hanford ALARA Center website is available at www.hanford.gov/rl/?page=973&parent=0

The D&D Knowledge Management Information Tool (D&D KM-IT) is a web-based knowledge management information tool custom built for the D&D community. The system was developed by Florida International University – Applied Research Center (FIU-ARC) in collaboration with the Department of Energy (DOE EM20), EFCOG, and the ALARA Centers at Hanford and Savannah River. http://dndkm.arc.fiu.edu/dndkm/

The ALARA Center provided the Saltstone Facility ALARA Coordinator with information concerning the five gallon radiological use poly bottle, aprons, and gloves. He was directed to his Industrial Hygienist for specific gloves for chemical protection.

The research group of CEA (a French government-funded technological research organization) and AREVA have constructed a new generation of very compact gamma camera called GAMPIX (photo below). The gamma camera was developed for nuclear dismantling activities or radioactive source search. The device enables the superimposition of a gamma image with a visible image, which is of help to locate radioactive hot spots in a given area. The best results in terms of sensitivity are obtained for ^{241}Am because of the low energy gamma-rays emitted by this radionuclide. Hence, this camera can be of great interest in order to detect plutonium, with high ^{241}Am concentrations. The detection of high-energy gamma-ray emitters, like ^{137}Cs or ^{60}Co, requires thicker masks. For more information see the ISOE News Letter No. 16, December 2010, page 3 (http://www.isoe-network.net/index.php?option=com_docman&Itemid=123).

The ALARA Center was contacted by personnel from the decommissioning activity of the Separations Process Research Unit (SPRU) facility at the Naval Reactors Knolls Atomic Power Laboratory (KAPL) needing a tape to repair radiological containments. The ALARA Center recommended G/O Corp yellow G-Flex Tape 6 inches wide by 20 yards long, product number GZ1042. Many of you are aware of the radiological incident that occurred September 29, 2010 during the decommissioning of the SPRU. The final Type B Accident Investigation Report is below for your review as a lessons learned. The Board identified the following two root causes for the accident:

- The failures to fully understand, characterize, and control the radiological hazard.
- The failures to implement a work control process that ensured facility conditions supported proceeding with the work.

The ALARA Center provided the Saltstone Facility with information to purchase four buckets (500 ft. per bucket) of Rad Chain, a yellow and magenta metal chain with #2 double loops. Through a patented process, the "EVERLAST" 2-mil ply powder coating that is baked on to create a durable and long lasting finish. The metal Rad Chain lasts longer and thus doesn't have to be replaced as often as the poly chain. http://www.gocorp.com/product.php?ID=41

The ALARA Center was contacted by personnel at the Pantex Department of Energy Nuclear Site in Carson County Texas in need of a company to procure containments. Contact information was provided for the Savannah River Site Containment Fabrication Facility.

The ALARA Center provided the following information to H-Area Tank Farm to procure four Minuteman X829 Ultra Low Particulate Air (ULPA) filtered vacuum systems.

Item	Part No.	Description
1	C82915-05	X829 Vac, includes ULPA filter, pre-filter, filter protector, cloth filter, and disposable bag
2	490022-1	20C Tool Kit, Dry
3	110030PKG	Pre-filter sleeve (6)
4	805038PKG	Paper Filter Protector (12)
5	760598PKG	Paper Filter Collection Bag (10)
6	805057	Cloth Filter Bag with Frame

The ALARA Center provided F-Area Tank Farm radiological engineer with product information to shield worker forearm to eliminate forearm extremity monitoring.

- LeadX Vinyl Sheeting and blockers, http://www.pnwx.com/Accessories/LeadProducts/Blockers-Shields/
- International Biomedical radiation attenuating surgical glove (tungsten), http://www.int-bio.com/glove.php

The ALARA Center provided Solid Waste with information to procure two of the Avacen Grip. The Avacen Grip (photo below) is a device developed to help people maintain their ideal core body temperature when working in extreme heat or cold conditions. Avacen uses a small vacuum to pull blood into the complex vascular structures (called AVAs) and keeps the AVAs open at the skin surface. Warm or cold temperature is applied to these open AVAs and then that warming or cooling is distributed by the heart to the core organs and muscles throughout the body. To view an example video of how the Avacen Grip works go to http://www.avacen.com/avacen/action?do=overview&topic=quick.

AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SUPPORT

The ALARA Center provided D&D with three Absorbtek Services iron Silflex 1 foot by 3 foot blankets. They will be used during dismantling of the Heavy Water Components Test Reactor (HWCTR).

The ALARA Center provided H-Area radiological engineer with the following portable shielding wall options for TRU repack work in H-Canyon Warm Shop.

- Lead Blankets placed in two additional jackets to reduce contamination potential
- Silflex iron blankets

The ALARA Center provided the F-Area TRU Radiological Protection Department (RPD) with three disk smear tools. Facilities needing a disk smear tool can contact the ALARA Center. Below is a picture.

UPCOMING VENDOR VISITS

JUNG Glovebox Gloves, 3/7/11, 766-H Rm. 1032, anytime 9:30 am – 11 am

ALARA CENTER POINTS OF CONTACT

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