

SRS ALARA CENTER (AC)

Engineered Solutions for Radiological, Safety & Industrial Hygiene Applications.

APRIL 2009 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 ShRINE at the ESH&QA Regulatory and Radiological Technologies web-site. www.srs.gov/general/programs/alara/

The FLUOR 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. This 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 Kimberly Clark SafeSkin single use disposable latex glove traditionally used at SRS for radiological use has been replaced with the Kimberly Clark Sterling Xtra Nitrile single use disposable glove. It will also be used for non radiological work and replace four other nitrile gloves. Advantages of the Sterling Xtra glove include:

- will not degrade as quickly when exposed to UV light
- is a latex/powder free product
- offers superior elasticity and strength and will not rip when tearing duct tape
- is easier to don and doff
- strong end user support communicated during the thirteen glove road shows conducted across the site during October 2008.

Store stock caption/ID numbers and a picture are listed below.

Material ID	Size	Kimberly Clark P/N	UOM	Gloves/UOM
32-23682.00	X Small	53137	CASE	1000 (500 pair)
32-23683.00	Small	53138	CASE	1000 (500 pair)
32-23684.00	Medium	53139	CASE	1000 (500 pair)
32-23685.00	Large	53140	CASE	1000 (500 pair)
32-23686.00	X Large	53141	CASE	1000 (500 pair)



On April 20, 2009 ALARA Center personnel conducted an observation of Waste Management Programs 55 gallon TRU drum handling activity (referred to as mining) in E-Area. The Radiological Protection Organization (RPO) requested the review so the ALARA Center could identify opportunities to reduce occupational worker radiation exposure when handling future drums with higher dose rates. The observation included mining operations on Pad 16 and an interview with the Radiological Protection Inspector covering the job. Below are ALARA recommendations provided to RPO.

- When banding drums together preload banding material in tool in low dose area away from drums.
- Manufacture an aluminum frame to mount LeadX Vinyl sheeting and attach to drum handling cart to provide shielding between the drum and worker.

The ALARA Center has ten pairs of the Unitrek blue rubber overshoe (part # SHOE-01E-BL) size 15-19 available for use in a radiological area. The overshoes are not store stocked due to low volume needs. The SRS referenced procedure is Manual 5Q1.2 Procedure 231, *Selecting Protective Clothing & Equipment*.

The ALARA Center ordered eighty pairs of radiation attenuating gloves from International Biomedical for Waste Operations (LWO), distributing 40 pairs each to both F & H Area Tank Farms. Store stocked tongs were also recommended for handling liquid waste samples. These gloves are made of tungsten and do not contain lead and are used to reduce worker extremity radiation exposure. www.int-bio.com/glove.php

Three sets of firefighter bunker gear removal step-off pads were ordered for emergency kits in H-Area. A set consist of personal protective equipment removal instructions for hot, warm, cold, and clean zones.

The attached DOE Occurrence Report was a management concern from Hanford Washington regarding functionality of a 3M GVP Powered Air-Purifying Respirator (PAPR). SRS uses the Bullard PAPR but this is a great lessons learned and reminder that the buddy system works and we are our brother's keeper.

On 4/27 ALARA Center personnel attended ESH&Q Director staff meeting to brief members on the G/O Corp signs guaranteed for 15 years against fading, chipping, peeling or cracking. They come in a variety of sizes and the purchaser designs the words and symbols. The ALARA Center recommended them to the Radiological Control Organizations 2.5 years ago due to a need for a more durable longer lasting outdoor sign. Attached is a sample of a sign previously purchased by SRS. www.gocorp.com/product.php?ID=117

The ALARA Center participated in the H-Area Tank Farm Spring Fling by manning a booth of personal protective equipment including heat stress items. Employees were interested in the CoolTech launderable and SoftTech Plus disposable modesty clothing.

The first quarter Site ALARA Committee meeting was held on 4/28/09 in 766-H. Dr. Ken Crase discussed neutron dose methodology changes. Neutron dose will increase beginning with the dosimeter cycle starting January 1, 2010. RPD is in the process of re-evaluating neutron doses in affected SRS facilities. There has been one ORPS reportable contamination event in M&O and none in LWO since January, 2009. The actual cumulative dose received for the site was 26 rem.

VENDOR INFORMATION & DEMONSTRATIONS

Quest Environmental and Safety Products provided the ALARA Center with several Vigil anti slip product kits. Products are available for stair nosings, ladder rungs, metal decks, boardwalks, and vinyl decks. A product is also available that glows in the dark.

On 4/22/09 Randy Martin with Environmental Alternatives, Inc. (EAI) visited the ALARA Center and conducted a seminar on the following EAI decontamination technologies. Area Closure Projects was most interested in the chemical extraction process for upcoming D&D of a plutonium facility.

- Chemical Extraction
- Concrete Shaving
- CO2 Blasting
- Surface Preparation and Abrasive Blasting
- High Pressure Water Blasting
- Gamma Spec and Characterization
- VACIS Mobile Gamma Ray Inspection

On 4/17/09 eighteen workers receiving ALARA training toured the ALARA Center. The tour is part of the lesson plan to encourage workers to utilize the Center and submit suggestions using the site IDEAS program. On 4/29-4/30, approximately twenty students from the Liquid Waste Multi Skill Technicians (MST) class toured the ALARA Center.

The ALARA Center now has a Minuteman X250 Twin Motor Industrial Vacuum with HEPA Filter for dry pickup and accessories for wet pickup. This system sits atop a 55 gallon collection drum with dolly cart and dump valve.

The ALARA Center approved an IDEAS submitted by a Radiological Protection Department employee to create a 6 inch by 8 inch label with the following words in magenta with yellow background to alert workers of radiological conditions. WARNING then radiation trefoil followed by words High Radiation Area May Exist! Contact RPD Prior to Room or Container Access. The Site Radioactive Source Control Coordinator will have the labels made and revise SRS Manual 5Q1.1 Procedure 502, *Radioactive Source Accountability & Control* to include the new label.

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