

**From:** Waggoner, Larry O  
**Sent:** Thursday, June 30, 2005 10:16 AM  
**Subject:** ALARA Center Activities for Week of June 27, 2005

**Attachments:** diamondcut2.doc  
Visit our Website at [www.hanford.gov/alara/](http://www.hanford.gov/alara/)

1. Forwarded article from Health Physics Journal on clean out and decontamination of a Hot Cell at the Quehanna Hot Cell Complex in Pennsylvania to Oak Ridge Site Radcon and D&D Radcon manager at Hanford. "Too Hot To Handle" reports on using a "Houdini" robot tractor equipped with a "Predator" arm from Kraft Telerobotics and a variety of end-effectors. Points of contact are [kkasper@scientechnology.com](mailto:kkasper@scientechnology.com) and [djallard@state.pa.us](mailto:djallard@state.pa.us).
2. Attended briefing at SNF concerning the planned hydrolasing of the K East Basin walls and floors as part of demolishing the fuel pool. Plan is to hydrolase the walls within 4' of the floor and sections of the floor where it will be cut. Once the hydrolasing is complete, 6' of grout will be added to the fuel pool and then a diamond wire used to section the walls and floor into blocks for disposal at ERDF. See attachment Wrote an ALARA Review and forwarded it to the Project Manager. This is an impressive system and should work well.
3. CH2M engineer stopped to see our vacuum cleaners. They have work to do in a closeout box that requires them to remove lead shot that was poured into the box years ago to shield radioactive hot spots. Plan is to vacuum the lead shot into a small drum and discharge the air through the vacuum cleaner's HEPA Filter. SWSD also has concerns over vacuuming radioactive dirt using a Euroclean 948 HEPA filtered vacuum cleaner. This vacuum cleaner has been upgraded with a better electrical cord and a 30 Amp plug-in. Recommended they secure the vacuum at least every 10 minutes so the dirt will not plug the vacuum cleaner. When this vacuum is shut down, a flapper opens and allows the dirt to fall into a plastic bag. If they overfill the unit, the dirt may not fall into the bag. They will pass this info to workers. Found them extra vacuum cleaner hose at the 2101-M warehouse.
4. Received a 100 page report from John Gadd who works for Bechtel-Jacobs at Oak Ridge. Report is on the Test Results and Evaluation of Expandable Foam for use at Oak Ridge. This report is well-written and has many photos showing what happens when foam is injected into piping and other components. Forwarded the report to key personnel who have an interest in using foam for radiological work. If you're interested in reading this document, contact Eby or Waggoner at the ALARA Center. Discovered a report that described the conditions of the ventilation system at PFP in 1994 with references back to its condition in 1971. Forwarded this report to D&D and Radcon personnel at PFP who are currently working on the vent system. See <http://www.osti.gov/energycitations/servlets/purl/10165535-g2o2Sy/native/10165535.pdf>.
5. Provided tour of the ALARA Center to two Fluor Government Group Senior Managers and gave them copies of some of the handouts on ALARA protective measures used by the Hanford workforce.

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#### FOR YOUR INFORMATION

A. Larry Waggoner will be at the Health Physics Society Summer School next week in Spokane. He and Kevin Funke from BHI will be teaching ALARA Work Practices and Hazard Controls during the week. Contact Jerry Eby at the ALARA Center.

B. Concrete Cutting Techniques - The Concrete Sawing and Drilling Association (CSDA) publishes a quarterly magazine with articles about the equipment used to cut and remove concrete structures. Links to two articles are below. D&D work involves cutting a large amount of concrete so work planners need to become familiar with the tools and equipment. In addition: [see the attached article on diamond wire cutting.](#)

<http://www.csda.org/displaycommon.cfm?an=1&subarticlenbr=90>

<http://www.csda.org/displaycommon.cfm?an=1&subarticlenbr=79>

THE CSDA permits copying articles as long as the following acknowledgment is included: "Reprinted courtesy of the Concrete Sawing and Drilling Association, Concrete Openings magazine, Issue Date \_\_\_\_". Subscription info for "Concrete Openings" (It's Free) can be obtained at [www.csda.org](http://www.csda.org) along with links to past magazines.

C. Low Levels of Ionizing Radiation May Cause Harm. The National Research Council released the BEIR VII Phase 2 report today ... the link is:

URL = <http://www.nationalacademies.org/morenews/> . It states:

### **Low Levels of Ionizing Radiation May Cause Harm**

June 29 -- A preponderance of scientific evidence shows that even low doses of ionizing radiation, such as gamma rays and X-rays, are likely to pose some risk of adverse health effects, says a new report from the National Research Council. In living organisms, such radiation can cause DNA damage that could eventually lead to cancers. The report provides a comprehensive assessment of these risks based on a review of the scientific literature from the past 15 years. It is the seventh in a series of assessments from the Research Council called the Biological Effects of Ionizing Radiation.

[Press Release](#)

[Report Brief](#) (164 KB file, requires free [Adobe Acrobat Reader](#))

[Full Report](#)

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NEWS FROM THE SAVANNAH RIVER ALARA CENTER

The SRS website is [www.srs.gov/general/enviro/rosc/index.html](http://www.srs.gov/general/enviro/rosc/index.html)

Heat Stress prevention continues to be a "hot" topic as ALARA Center personnel try and assist facilities with equipment and advice on heat stress prevention. One facility is using the French Product "STMI", which is a gel that can remove fixed contamination. Their annual Radcon Training will include a tour of the ALARA Center to promote the use of new engineering controls. SRS is evaluating the shielded sample carriers developed by 222-S lab personnel that are made from Tungsten and plastic instead of lead. They recently purchased 16' long tools used to change out light bulbs. Plan is to modify the ends for taking smear surveys. They continue to look for ways to make "seal-outs" from gloveboxes safer. They are currently looking at a hot-knife used to cut rope and trying to find a portable heal sealer. Die-Quip Corp will be demonstrating their line of metal cutting equipment for use in size-reducing glovebox waste materials. PFP has a tool they are evaluating now. See [www.diecorp.com](http://www.diecorp.com).

QUESTION:

The information below was forwarded by Bob Thomas from CH2M. The intent of the system described is for Homeland Defense. Would it be valuable for personnel trying to characterize remote areas for D&D? If you think it has merit, please let us know and we'll try and set up a demonstration.

Berkeley Nucleonics, a leading supplier of radiation detection and training services, is now offering networking capabilities in handheld, portable isotope identifiers.

The new integrated radiation detection and automated reporting network enables first response or other personnel in the field to transmit data to a centralized facility, advising appropriate response and decisions.

Features and Benefits include:

- Personal electronic device with Isotope ID
- Automatic and on-demand 2-way communication
- GPS tracking and archiving of radiation levels
- Friendly and flexible web interface
- Support from Certified Health Physicists for pilot programs or SOP changes

If you are interested in advancements in nuclear radiation detection technologies, please email or call for more information on these exciting developments.

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