the DOD Executive Agency.....Serving Department of Defense and other Federal Generators since 1992

the Rad Waste News

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January 1999

The 9th Annual DOD Generator's meeting will be held 30-31 March in Albuquerque, NM.

Keep checking our web site for information and on-line registration forms.

Thanks for your support !!!

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CHECK OUT OUR WEB SITE FOR THE LATEST INFORMATION ON THE 9TH ANNUAL DOD GENERATORS MEETING !!!

The Newsletter of the Executive Agency for Low-Level Radioactive Waste
Rosalene Graham, Chief

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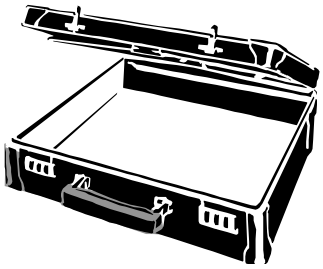
On the World Wide Web at: http://www.ioc.army.mil/dm/DMWWEB/indexdmw.htm

From the Desk of the Chief



On 5 July 98, I took over as the Chief, Safety/Rad Waste Team from Steve Mapley. Steve is now the Chief of the IOC Command Center. Steve served for three years as the Chief of RadWaste and we will miss him in this capacity. During his three years, Steve helped transform the RadWaste Team into a business-like operation. With his leadership, the radwaste team:

Developed a customer feedback form, seeing tremendous levels of customer satisfaction from the form.

Grew a list of satisfied federal customers (volunteer customers that could go to other sources).

Changed our operating procedures to radically lower the number of violations cited by regulators.

Lowered our cost to customers through a number of alternatives (self-brokering, increased use of 'runs', aggressive contract initiatives, and pursuing new alternatives (reuse, recycling, waivers and deviations).

Took the risk to start 'self-brokering' shipments which resulted in learning, greater customer satisfaction, cost avoidance and increased job satisfaction.

Got folks to recognize our abilities to provide support services such as: radiological surveys and decommissioning, transportation of radiological material (RTGs and gun tubes).

Obtained a new DOD Charter on the LLRW management.

Got the ACERT mission recognized and into doctrine.

Maintained a very good working relations with the NRC, Interstate compacts and state regulators.

Got an acceptable NRC compliance audit at a time when the NRC was finding faults with other commands (In fact the NRC was complementary on the way the IOC handled our license inspections and our installation RPOs.)

Increased the quality of the Annual DOD LLRW Generator's Meeting.

Watched the 8A BOA contracting approach blossom and 'grew' some great contractors for our 'stable.'

I vow to continue Steve's legacy of business orientation and innovation. As we move into the 21st Century, we need to maintain our competitive edge and take a leadership position in Rad Waste Disposal within the Federal government.

My background is in the operational Army as a Safety Manager. I look forward to learning the Rad Waste Disposal business. Please feel free to call, write, e-mail, or fax me with any of your concerns about how we do business.

Thanks!

Rosie Graham, CSP

e-mail: grahamr@ioc.army.mil - (309) 782-2989 - fax (309) 782-2289

NEWS SHORTS

by Richard Conley, Editor

Ninth Annual DOD Generators Meeting

Your erstwhile Editor is also your meeting coordinator for the Annual Generators Meeting, and as such I want to take this opportunity to again thank all who made last year's meeting such a big success! These meetings are not just, as we say in the Executive Agency, a big boo-diggle. THEY ACTUALLY WORK!!! Please take a look at Mike Styvaert's article and see how we adapted a technology presented at last years meeting to our current remediation project at Lake City AAP. The pressure is on to make this year's meeting even better and we have gone a long way in that direction in selecting this year's site. We will be at the Marriott in Albuquerque. Keep checking our web site for more information and a new on-line registration system.

Department of Energy (DOE) Low-Level Radioactive Waste Management Conference

The Executive Agency chaired a session at DOE's recent conference in Salt Lake City. Sandy Birk, Bob Curl, Donna Lake, Robert Rittenberg, and Linda Newberry deserve a lot of credit for putting on an informative, high quality conference. Your Editor opened the DOD session with some background information on the DOD Executive Agency (DODEA), then introduced our first speaker, Mike Styvaert. Mr. Styvaert presentation outlined our decommissioning efforts at Lake City AAP which have been chronicled in this newsletter. Mike showed how we at the DODEA took an existing new technology and modified it to meet our needs. See Mike's article on pages 4-5 of this issue for the details. Kelly Crooks, the DODEA Operations Team Leader, followed Mike with the latest information on our tritium recycling efforts. The DOD session closed with a presentation by Julie Petersen of the Omaha District of the Corps of Engineers. Ms. Petersen presentation outlined the innovative approaches that the Corps is using to dispose of low specific activity material. The complete proceedings are available at:http://www.inel.gov/resources/research/.llrw/1998 Conference/top.html.

OUR INTERNET SITE

We recently added a "licensing" section to our web page. In this section, you will find information on our DU license and our promethium license. We are currently working to add additional information to our web site that will assist those who handle our licensed items. For additional information call Gary Buckrop, (309) 782-2969, e-mail to buckropg@ioc.army.mil .

The Barnwell Situation

With a new Governor waiting in the wings, we can expect changes in South Carolina. One State senator intends to file a bill to have South Carolina rejoin the Southeast Compact, while a recommendation of Governor elect Hodges' transition team is to close the Barnwell site as a national disposal site, allowing only South Carolina generators to dispose of LLRW there. As the 1999 South Carolina General Assembly convenes, we will diligently watch events unfold. As always, we continue to search for the most cost effective and safe disposition of DoD's LLRW. Do to the lead-time and frequency of this publication, I would direct you to the Low Level Radioactive Waste Forum's web site as well as John Vincenti's ACURI web site for up to date reports regarding Barnwell and other major news in the industry: http://www.afton.com/llwforum and http://www.acuri.com/.

Simplified Automatic Surveying System

by Mike Styvaert, Health Physicist

We are managing a decommissioning project at the Lake City Army Ammunition Plant (AAP) in Independence, MO. Our decommissioning contractor is the Allied Technology Group (ATG). The Lake City AAP firing range is an operational test range for small caliber conventional munitions testing. In the past the installation has tested and demilitarized depleted uranium (DU) ammunition on the range. The DU metal and contaminated soil that remains on the range and in the surrounding grounds is licensed by the Nuclear Regulatory Commission (NRC), Region III to the U.S. Army Industrial Operations Command (HQ, IOC) under license number SUC-1380.

We contracted with ATG for a comprehensive radiological characterization in 1993. The characterization report identified four main areas of the firing range that are contaminated with DU. Three of the areas are still used and are considered active: the 600-yard bullet catcher area, the 1,750-yard impact area, and the 2,188-yard impact area. The fourth is the Area 10 sand pile, which is not actively used.

The first phase of decommissioning, which started in September 1998, involves removing the DU and DU-contaminated soil/sand from the Area 10 sand pile. For many years, the installation used Area 10 as a range waste dumping/disposal area.

During the decommissioning plan approval process, the NRC expressed their concern with our radiological release of a large sand mound (approximately 200,000 ft3) at the South end of Area 10. We initially addressed their concern by agreeing to spread the material out in incremental 6-inch lifts and performing a NUREG/CR-5849 release survey. That strategy then created concerns from the Missouri Department of Natural Resources (MDNR) and the Environmental Protection Agency (EPA) that our plan to spread the large sand pile might accelerate the migration of lead and/or unexploded ordnance contaminants that may be present.

At the suggestion of the MDNR, we designed an automated system that involves conducting our radiological surveys on a conveyor system and staging the suspect material in super-sacks until it is completely analyzed for the presence of radioactivity and hazardous materials. Commercially available radiological sorting systems proved to be too expensive for our particular scenario so we identified a local

supplier of material handling systems (Power Screen Inc.) and designed our own system. We tailored the equipment to meet our needs and we fabricated a radiological detection array mounting system. The system operates by loading the material into a feed hopper. A small adjustable speed conveyor in the loading bin allowed us tailor the feed rate and subsequently the material depth for surveying purposes. The system supplier customized the equipment in the field and allowed us to adjust the primary conveyor belt speed. As a result we were able to setup the system to exactly simulate a NUREG/CR-5849 compliant survey. The material depth is controlled to a maximum depth of 6-inches, the primary belt speed was set to 0.45 m/s and our 2" x 2" NaI detection array was mounted to ensure we are surveying 100 percent of the feed material. Once the material passes through the NaI array, it proceeds up the conveyor and is passed through a 5mm vibratory screening apparatus. The large fragments are being separated and will be at some point subjected to a thermal treatment due to the potential unexploded ordnance hazard. The surveyed and screened sand is being staged in 1-cubic yard supersacks. We collect gamma spectroscopy samples at the prescribed NUREG/CR-5849 frequency. We wish to express our thanks to the U.S. Army Corps of Engineers, Kansas City District for developing (and coordinating with the EPA and MDNR) the sampling plan for hazardous materials.

Our system does not allow us to segregate clean material from DU contaminated material, however that wasn't of much concern since we ***were*** relatively certain that the entire pile was clean from a radiological standpoint. The system would however, allow us to meet all site-specific regulatory and environmental concerns at an extremely economical cost. After completing approximately 25% of the large sand pile we began to detect DU fragments from the heart of the 200,000-ft3 pile. Our system worked as designed, unfortunately it wasn't designed to efficiently segregate the contaminated materials from the radiologically clean materials. Our next step is to collect additional characterization samples and decide how to proceed.

Key contributors to this process:

Mr. Frank Whitaker - ATG Project Manager
Mr. Terry Keane - ATG Site Supervisor
Mr. John Donohough - Power Screen Corporation
Mr. Mitch Scherzinger - MDNR
Mr. Garth Anderson - U.S. Army COE, KC district
Mr. Bill Melton - Lake City AAP
Mr. Frank Absshire - Olin Corporation
Mr. Bill Melton - Lake City AAP
Mr. Dave Nelson - NRC Region III

New Guidance on Testing Requirements for Mixed Radioactive and Hazardous Waste (Mixed Waste)

by Bill Metcalf, Health Physicist

The U.S. Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA) published final guidance on the testing requirements for mixed radioactive and hazardous waste (mixed waste) in the Federal Register (62 FR 62079, November 20, 1997). In the past, generators have expressed concerns that EPA's testing requirements for the hazardous component of mixed waste could result in increased radiation exposures.

The guidance provides mixed waste managers with practical methods for complying with the regulatory requirements of NRC and EPA. The published guidance suggests the use of process knowledge as often as possible to determine if a waste is hazardous, and avoid unnecessary exposures to radioactivity. Guidelines are provided for generators to evaluate their waste streams using process knowledge.

Some strategies are offered to maintain radiation exposures as low as is reasonably achievable (ALARA), if testing is required. One strategy uses a sample size of less than 100 grams, as long as the resulting rest is sufficiently sensitive to measure the constituents at regulatory levels outlined in the Toxic Characteristic Leaching Procedure (TCLP). The other prescribes the use of surrogate materials, as long as they are chemically identical to the mixed waste and represent the hazardous constituents in the waste. Allowable sampling and testing procedures are also outlined in the guidance.

Who could use this type of information? Installations with manufacturing/maintenance operations or operators of facilities that treat, store, or dispose of hazardous wastes. These facilities must obtain a chemical analysis of a representative sample of their waste. The analysis assures that the operators have the necessary information on the properties of the waste to be able to treat, store, or dispose of the waste in a safe and appropriate manner.

We can provide a copy of the guidance as requested. Just contact Mr. Bill Metcalf, DSN 793-2248, com 309-782-2248, e-mail metcalfw@ioc.army.mil.

ENVIROCARE UPDATE

by Kelly Crooks, Health Physicist

With various lawsuits in litigation and a new license application out for review, we periodically get questions on the status of the Envirocare of Utah disposal site. Well, things appear to be just fine out in the salt flats. The lawsuits have been dismissed or are being resolved and on 22 Oct 98 Envirocare received its new license for disposal of low-level radioactive waste.

Among the license changes are higher acceptance concentrations for many radionuclides and additional acceptable radionuclides. Of particular interest to us is the new limit for depleted uranium that allows straight disposal. So, we can now dispose of waste like demilitarized DU penetrators for a few cents a pound.

Also, the Northwest Compact Commission removed the 1,000 cubic foot minimum volume requirement. So small shipments can go to Envirocare now too.

All in all, most Class A material, other than sources, can go to Envirocare for disposal now. This gives us an inexpensive outlet for virtually all contaminated soils and debris.

Reminders from the Industrial Operations Command (IOC) NRC License Holder

by Paul Grooms

Light Antitank Weapon (LAW) Sights

Don't forget that the front sight of the M72, M72A1 and M72A2 models of the LAW contain promethium-147 (Pm-147) and require proper disposal as radioactive waste.

After firing, the front sight must be removed and provided to your organization's Radiation Safety Officer (RSO). The RSO will coordinate a radioactive waste disposal action with the IOC. The IOC centrally funds radioactive waste pickups for Pm-147 LAW sights, as well as other radioactive items. The front sights containing Pm-147 can be readily identified by the presence of a white cross (+) at the 100 and 150 meter markings on the sight. The markings on LAW sights without Pm-147 are in red only.

Radiation Safety Officer Qualifications

If you have those items, do not forget that if you change RSOs or alternate RSOs you need to provide the IOC a copy of their qualifications. The NRC requires that we have on file the qualifications of all RSOs who use our commodities. This is easy, just send the IOC a list of the Rad courses your RSO has had and the dates. No particular format is required and you can e-mail or fax this information to the POCs listed at the end of the article.

Accident Reporting

In addition to LAW rockets the IOC also manages the Army's NRC license for depleted uranium (DU) ammunition.

Installation RSOs must report accidents or incidents involving DU ammunition or LAW rockets to the IOC as soon as possible. Reportable incidents include:

1. Theft or loss of control of DU ammunition or LAW rocket items.
2. Functioning of DU ammunition items.
3. Fires, explosions, or accidents involving storage structures, transport vehicles, or Army weapon systems that contain DU ammunition or LAW rockets.
4. Accidents or incidents that damage or expose DU components or promethium LAW rocket sights to the environment.
5. On-post, or improper off post, disposal of DU ammunition items or promethium LAW rocket

For additional information contact Paul Grooms and Gary Buckrop, DSN 793-2976/2969 or (309) 782-2976/2969, respectively, E-mail: groomsp@ioc.army.mil and buckropg@ioc.army.mil respectively. We will post this information on our web site. Check us out at http://www-ioc.army.mil/dm/DMWWEB/indexdmw.htm.

Additional information of this nature can be found on the RPO CD. Contact U.S. Army Communications and Electronics Command, Directorate of Safety Risk Management, ATTN: AMSEL-SF, Bldg 2539 Laboratory Road, Fort Mommouth, NJ 07703-6403, about receiving a copy.

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or the WORLD WIDE WEB at http://www.ioc.army.mil/dm/DMWWEB/indexdmw.htm

***the* RAD WASTE NEWS**

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