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Demil Dispatch

Recent Progress on the Blue Grass Army Depot Demilitarization Effort.

*Kentucky Department for Environmental Protection
Division of Waste Management
Hazardous Waste Branch
Blue Grass Army Depot Section*

KDEP Visits General Atomics and Parsons

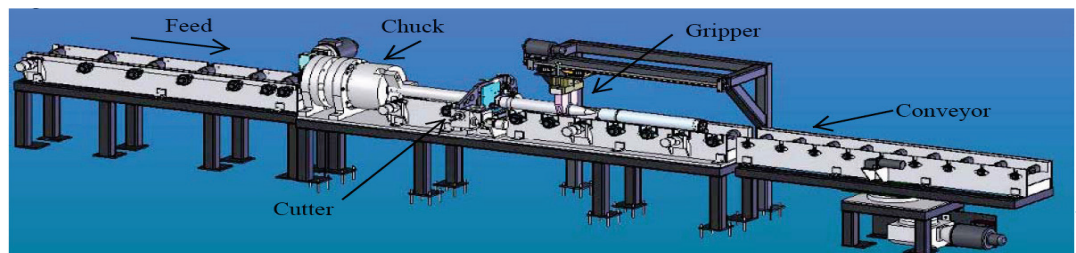
In early March personnel from the Kentucky Department for Environmental Protection's (KDEP) Hazardous Waste Branch (HWB) attended a multi-destination trip to view Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) equipment at their manufacturing sites.

The first site visited was General Atomics in San Diego, California. The Supercritical Water Oxidizers (SCWO) were being fabricated and tested at the General Atomics campus. The SCWO system will be responsible for converting agent and energetic hydrolysate into water, salts, and carbon dioxide gas. This treatment will create a much safer waste product to dispose of from the BGCAPP facility.

The second site visited was the Parsons fabrication shop in Pasco, Washington where personnel were able to view many pieces of equipment. The Rocket Cutting Machine (RCM) and Rocket Shear Machine (RSM) were both at the Pasco facility waiting testing before shipment to Kentucky. The RCM (pictured below) separates the

warhead from the rocket motor. The rocket is held in place by the chuck then rotated while a stationary blade (the cutter) is slowly inserted, cutting through the shipping and firing tube which is removed by the gripper, then the rocket is cut. The agent-containing warhead is then sent to the RSM where it is punched, drained, rinsed, and sheared into segments that will later go to the Energetics Batch Hydrolyzer (EBH). Equipment from the projectile line was also on-hand. Staff viewed the Nose Closure Removal System (NCRS) which unscrews the lifting lug from the projectiles to access the agent cavity as well as the Munitions Washout System which rinses the agent and heel from projectile bodies before they are sent to the Metal Parts Treater (MPT).

These site visits and discussions with the manufacturing personnel who have an intimate knowledge of the equipment they are making and testing have helped enhance KDEP's understanding of the BGCAPP facility in addition to the knowledge gained from meetings and permit submittals.



How the NEPA Process Works

The National Environmental Policy Act (NEPA) was signed into law Jan. 1, 1970 with regulations promulgated in 1978 for implementation by federal agencies. NEPA declares in Title I that federal government is required to use all practicable means to create and maintain

conditions under which "man and nature can exist in productive harmony." This declaration is of course broken down into more specific requirements that federal agencies must follow for assessing the environmental impact of projects.

There are three levels of the NEPA process. At the first level a Categorical Exclusion may be given if the project meets certain guidelines which have been previously shown as to have no significant environmental impact. At the second level an Environmental Assessment (EA)

How the NEPA Process Works (Continued)

is performed which has a number of requirements and may also include risk assessment. An acceptable conclusion would be a finding of no significant impact (FONSI). If the EA shows that there could be some environmental consequences of concern, then a more in depth Environmental Impact Statement (EIS) is drafted.

The Council of Environmental Quality (CEQ) oversees NEPA. The federal agency governing the project is responsible for meeting NEPA requirements. However, the Environmental Protection Agency (EPA) and the public also play a major role in the process. The Clean Air Act requires EPA to comment on foreseen environmental impacts due to federal facility projects and refer unsatisfactory actions to CEQ. EPA keeps a record of these comments and is also designated as the recipient of EIS documentation. The public is encouraged to

participate in the NEPA process from start to finish in initial scoping, attending meetings and also providing feedback during the comment period.

A final environmental impact statement (FEIS) was issued in April 2002 for the chemical weapons destruction technology at the Blue Grass Army Depot. The record of decision was issued in February 2003, choosing neutralization followed by supercritical water oxidation as the process for destroying the chemical weapons stockpile in Richmond, Kentucky.

This article is only intended as an overview of the NEPA process. More information can be found through EPA.gov. The federal regulations on implementation of NEPA are located under 40 CFR Parts 1500 – 15081. Specific federal agencies may also have separate regulations for NEPA such as the Army's 32 CFR part 651.



Carroll County fourth graders collect straws during the "Deadly Links" game while learning about the food web

BGAD Section Employees Lend a Hand

When they're not reviewing permits and regulations members of the Bluegrass Army Depot Section enjoy participating in activities to benefit the youth and environment in Kentucky.

The 48th Louisville Regional Science Fair was held March 10, 2012 on the Belknap Campus of the University of Louisville. The science fair serves middle school and high school students in Jefferson County and the 13 surrounding counties. One hundred eighty-three projects and 187 students were scheduled to participate in various categories including: animal sciences, cellular and molecular biology, chemistry, computer science, earth and planetary science, energy and transportation, engineering, microbiology, physics and astronomy, and plant sciences. The Blue Grass Army Depot (BGAD) section of the Hazardous Waste Branch (HWB) provided a "Finalist Judge" to participate in the selection of the outstanding student projects sent to the 62nd Intel International Science & Engineering Fair held May 13 – 18, 2012 in Pittsburgh, Pennsylvania.

Department for Environmental Protection (DEP) volunteers picked up 19 bags of mostly broken glass weighing in at 624 lbs. around the trails behind 200 Fair Oaks during Commonwealth Cleanup Week in March. Several bags of litter were also collected along the Lewis Ferry Road boundary. Volunteers greatly enhanced the aesthetic appeal of two areas that are to be used as outdoor classrooms in the near future.

The BGAD section also had a representative present at a few Earth Day events. At Gallatin Steel's Earth Day Celebration on April 19 a member of the BGAD section discussed the food web with fourth graders from Carroll County. The students also played a food web related game which demonstrated how chemicals can find their way into the food web and adversely affect the various trophic levels through bioaccumulation. Other educational sessions lead by Gallatin Steel employees, Soil Conservation representatives, and Division of Forestry representatives included simple machines, tree planting, electrical circuits, and rocks.

At Kentucky State University's Earth Day Celebration, on April 20, Division of Waste Management (DWM) employees handed out organic apples, discussed recycling, as well as the proper disposal of items such as compact fluorescent light bulbs and cell phones. Staff also informed students about jobs they could get with the Department for Environmental Protection with their respective majors. The event also featured, a "Trashion Show," consisting of outfits made of reclaimed materials, a recycle-thon, hybrid car displays, paddlefish from the KSU aquaculture center, a reptile show, and many other interesting exhibits.

It was agreed that these experiences were rewarding and well worth the time. Everyone should make time in their busy schedule to reach out and hopefully make a difference.

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KSU students utilized various discarded items to make clothing at the "Trashion Show".

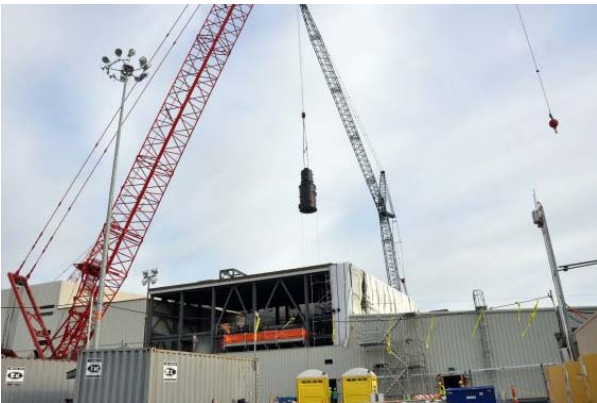
BGCAPP Construction Nears 50 Percent Complete



Cranes prepare to erect the nitrogen storage vessel after its 1,800 mile tour from Idaho to Kentucky.



An Energetics Batch Hydrolyzer (EBH) is lowered into the Munitions Demilitarization Building (MDB) to process the energetic portions of munitions.



Cranes work to place a Thermal Oxidizer into the MDB to treat potential off-gassing from the Metal Parts Treater (MPT).



Carbon filter banks serve as the last stage of the cascading air filtration system on the MDB.



The modular laboratory buildings have arrived at the BGCAPP site and are being placed.



Protective coatings are applied to the MDB concrete to prevent any migration of chemicals from the building and make any necessary cleanup easier for the workers.

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The mission of the Kentucky Division of Waste Management is to protect human health and the environment by minimizing adverse impacts on all citizens of the Commonwealth through the development of fair, equitable, and effective waste management programs.



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Photographs courtesy of ACWA, BGCAPP, CMA, Gallatin Steel, KSU, and KDEP