NEWS RELEASE

Main destruction equipment installed at Blue Grass chemical plant

Workers install Agent and Energetics Neutralization Reactors that will destroy weapons' chemical agent and explosive components

Oct. 12, 2011
FOR IMMEDIATE RELEASE

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RICHMOND, Ky. – The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) team reached a major milestone this week with the installation of two Agent Neutralization Reactors and three Energetics Neutralization Reactors in the pilot plant's Munitions Demilitarization Building. The reactors are the heart of the neutralization process the plant will use to safely destroy the chemical weapons currently stored at the Blue Grass Army Depot.

This two-day effort began Tuesday as construction site workers carefully placed each of the 3-ton Agent Neutralization Reactor vessels into the building where the chemical weapons will be disassembled, their explosive components removed and the chemical agent drained and neutralized. They used the same process Wednesday to place each of the 6-ton Energetics Neutralization Reactor vessels.

"Installing these complex and specialized vessels is a significant milestone in our construction efforts," said Tom McKinney, project manager for BGCAPP systems contractor Bechtel Parsons Blue Grass. "The vessels were designed and fabricated to exacting specifications and our construction workforce did an outstanding job to ensure we had a safe and quality installation."

Jeff Brubaker, BGCAPP site project manager agreed, "Future destruction of chemical weapons using these installed agent and energetics neutralization reactors will allow us to safely complete our mission. As we continue our construction momentum, installing this equipment is an indication we are another step closer to safely destroying the Blue Grass chemical weapons stockpile."

Once operations begin, the plant will remove both explosive components (energetics) and chemical agents from the stored weapons and destroy them in separate processes.

The Agent Neutralization Reactors work by mixing the chemical agent with hot water and sodium hydroxide in an irreversible chemical reaction that will destroy the agent. The reactor vessels are made from Hastelloy®, a metal alloy with greater strength and resistance to corrosion than stainless steel, and have a 2,400-gallon capacity. The two reactor vessels are part of the BGCAPP agent collection and neutralization system, which is made up of seven tanks, vessels and other support equipment – all of which have now been installed. This system is designed to collect and store the agent, neutralize and verify its destruction, and transfer the hydrolysate byproduct to storage tanks where it will await processing in the Supercritical Water Oxidation Process Building.

The Energetics Neutralization Reactors work much like the Agent Neutralization Reactors but are fabricated from carbon steel and nickel alloy and have a 2,700-gallon capacity. During BGCAPP operations, an automated process will remove the weapons' explosive components, which will be transferred to Energetics Batch Hydrolyzers where the energetics and any residual agent will be neutralized by mixing with water and sodium hydroxide. The byproduct of this irreversible chemical reaction, a liquid known as energetics hydrolysate, is then fed to the Energetics Neutralization Reactors. The final step in energetics destruction occurs when the energetics hydrolysate is processed in the Supercritical Water Oxidation Reactors.

Blue Grass Chemical Agent-Destruction Pilot Plant

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A Partnership for Safe Chemical Weapons Destruction

www.pmacwa.army.mil

BGCAPP is being built to safely and efficiently destroy a stockpile of chemical weapons currently in storage at the Blue Grass Army Depot. The plant will use a neutralization followed by supercritical water oxidation to destroy 523 tons of blister and nerve agents loaded into rockets and projectiles. Construction of the pilot plant is currently 40 percent complete and work is progressing on a variety of facilities to support chemical demilitarization operations.

For more information on the project, please visit the Assembled Chemical Weapons Alternatives website at **www.pmacwa.army.mil**.

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One of two 2,400 -gallon capacity Agent Neutralization Reactors is lowered into place in the Munitions Demilitarization Building, the pilot plant's main processing building. Once plant operations begin, the Agent Neutralization Reactors will mix liquid chemical agent with hot water and sodium hydroxide to neutralize the agent.

Workers guide the third of three Energetics Neutralization Reactors (ENR) into place at the pilot plant. Workers had to align each of the reactors perfectly on specially coated pads in the Munitions Demilitarization Building to complete the placement. The ENRs will be the last step of the neutralization process for the explosive components of the chemical weapons, which are known as energetics. The covers on the reactors are in place to protect the equipment from the elements.