



Reutilized Heating, Ventilation and Air Conditioning Filter-Housing Units

A Partnership for Safe Chemical Weapons Destruction

Re-using metal filter-housing units could save U.S. taxpayers millions

The Blue Grass Chemical Agent-Destruction Pilot Plant, known as BGCAPP, will use Heating, Ventilation and Air Conditioning filter units to maintain a cascade ventilation filtration system that treats air from the facility and ensure that no agent is released to the environment. The air filtration system protects workers, the public and the environment by constantly moving air from areas without chemical agent, to areas with agent, and then through activated charcoal filters. This negative pressure system guarantees both clean air for the workers and total containment of chemical agent.

The BGCAPP team is considering the use of filter-housing units previously used by the U.S. Army Chemical Materials Agency at the Johnston Atoll Chemical Agent Disposal System, known as JACADS, located in the Pacific southwest of Hawaii. They may be provided to the Program Manager Assembled Chemical Weapons Alternatives as part of the agency's policy to recycle equipment and spare parts, when possible. This environmentally friendly policy of recycling so far has resulted in more than \$15 million in cost savings to taxpayers and the U.S. government.

The BGCAPP project may reutilize ten filter-housing units, which are metal containers that hold the charcoal filters. They have been properly decontaminated and are in excellent condition. By reutilizing these filter-housing units, approximately \$5 million can be saved by avoiding the purchases of new units and their associated spare parts.

While in use on Johnston Atoll, these units had the same purpose – to hold the filters that treat air from the facility. Over the course of that operation, the up-stream airflow portions of some of the filter-housing units were potentially exposed to all three agents processed at the facility: mustard agent HD and nerve agents GB and VX. Consequently, portions of these units may have been contaminated with vapor from any or all of the three agents. The filter-housing units were never exposed to any liquid chemical agent.

The JACADS Closure Team removed all of the internal air filters and charcoal elements from the units. The empty stainless steel units that remained were then completely decontaminated and all potentially contaminated portions of the filters units, such as permeable gaskets and seals, were replaced. Those components that couldn't be decontaminated, such as electrical conduit and cables, were fully removed. During the decontamination process, an approved decontamination solution was applied to the surface being decontaminated and the surface was mechanically agitated. The solution remained on the surface for a prescribed saturation period and then the surface was completely rinsed with water. Agent monitoring of the decontaminated filter-housing units was conducted in accordance with Army regulations. Automatic Continuous Agent Monitor Systems sampling proved the effectiveness of decontamination efforts.

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Information

The filter-housing units were shipped from Johnston Island in September 2003 to the original manufacturer, IONEX Research Corporation, in Lafayette, Colorado, where they currently await refurbishment activities, such as the installation of new electrical components and filters. All the work to refurbish, test and re-certify the units for chemical operations will take place at the IONEX facility. The Bechtel Parsons Blue Grass Team would be involved throughout the refurbishment activities to ensure that the units are refurbished in a manner that meets the needs of the Blue Grass plant and all applicable environmental regulations. Upon completion, the units would be fully sealed to provide an airtight and weather-tight enclosure to protect them from the elements. They would then be shipped to and stored at the Blue Grass Army Depot until the time for installation at the plant there.

The government and its contractor teams are committed to safeguarding the environment and conducting operations safely, while at the same time realizing cost savings/avoidance wherever possible.



Filter housing units at Johnston Island facility, May 03, prior to being dismantled and transported to IONEX Research Corporation in Colorado

FOR MORE INFORMATION CONTACT: The Blue Grass Chemical Stockpile Outreach Office at 859-626-8944, Bechtel Parsons Blue Grass Public Involvement at 859-625-1291, or call Blue Grass Army Depot Public Affairs at 859-200-3008. Blue Grass Chemical Activity Public Affairs is also available at 859-625-6897.