



News Release

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22 May 2013

ECBC completes GPL monitoring at Umatilla Chemical Agent Disposal Facility

Inventory list for onsite monitoring equipment adds value to transportable support

ABERDEEN PROVING GROUND, Md. – Supporting a larger quest to establish a legacy of environmental responsibility in northeast Oregon, the U.S. Army Edgewood Chemical Biological Center has safely sampled, monitored and analyzed 58 hazardous waste management units, or igloos, at the Umatilla Chemical Agent Disposal Facility (UMCDF). Some of these igloos once stored chemical agents.

CBARR has been at the Umatilla Chemical Depot monitoring igloos before the contract was switched to the Chemical Materials Activity (CMA). Through a unique Cooperative Research and Development Agreement, CBARR and site contractor URS continued the relationship to monitor in accordance with the UMCDF Hazardous Waste Permit and then to close the igloos in accordance with the Closure Plan.

CBARR began the General Population Limit (GPL) monitoring project in November 2012 and finished on May 21, 2013. Real-time Analytical Platforms (RTAPs) are mobile vehicles equipped with Depot Area Air Monitoring Systems (DAAMS) and Miniature Continuous Air Monitors (MINICAMS), and are used onsite to examine the interior atmosphere for potential hazards. Mustard Igloos Temperature Conditioning Systems (MITECs) are also used onsite to heat the igloos to about 80 degrees Fahrenheit and clear the structure of any chemicals that may be present.

“MITECs are big heaters that are staged inside the igloo,” said Satchell Doyle, CBARR chemical engineer and Umatilla project manager. “They heat the inside of the structure to at least 80 degrees. Two RTAP operators then use the DAAMS and MINICAMS to monitor the atmosphere to make sure it is not hazardous. After 12 hours at 80 degrees Fahrenheit, a sample is collected shipped back to ECBC at Aberdeen Proving Ground, Md., where CBARR conducts GPL analysis.”

The sampling methodology used in GPL monitoring requires the utmost accuracy due to the extreme sensitivity of this kind of work, said Doyle. Common challenges include background interference from trace organophosphate pesticides, hydrocarbons and other airborne chemicals in the ambient air. Trained and experienced CBARR personnel ensure these challenges are met with precision, supporting a larger demilitarization effort that requires the safe decontamination and clearing of igloos located on the depot.

According to Doyle, four CBARR employees operated the RTAPs and MITECs in a supporting effort to contractor URS as the UMCDF/UMCD Closure Plan transitions the land to the state of Oregon. CBARR supports URS in the closure effort using state-of-the-art monitoring equipment to assess and confirm the chemical agent hazard has been alleviated prior to turnover.

Aaron Sredin, CBARR chemical engineering technician and RTAP operator, was responsible for conducting weekly "first-entry" surveillance tests on the igloos, six of which had agent contaminated waste items that were shipped to Port Arthur, Texas for incineration. In addition to the task, Sredin put together an inventory list of all the items that supported equipment used by the RTAPs, including generators, gas chromatographs and heaters.

"If we were going to use these RTAPs anywhere else, what would I need?" Sredin recalled. "I pulled out every item that I deemed necessary for each of the six instruments that we were using inside three RTAPs onsite. I categorized everything from quantity to part number."

According to Sredin, the equipment holds up fairly well during operations, but it is likely that filters for the hydrogen and nitrogen air generators may need to be replaced depending upon the humidity in a given location. The inventory list saved URS valuable time in determining which parts were necessary for onsite work, whether it is the UMCDF or the U.S. Army Pueblo Chemical Depot, where the RTAP equipment may be used.

For more information about ECBC, visit <http://www.ecbc.army.mil/>.

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