AMEC Builds Trust, Green Infrastructure

AMEC meeting in Arlington, VA.

So the cold war is over, and you have over 100 nuclear submarines the world wants you to get rid of. You have little information about how they're made, no established procedures for disassembling them, and no money to do research to find out about them. What do you do?

With the collapse of the Soviet Union and the subsequent signing of the START-I treaty, Russia was in that exact predicament in the 1980's. Faced with minimal funding and a lack of qualified technical facilities and personnel to handle the dismantling, the only practical solution was to decommission the aging subs and in some cases sink them into the ocean. By 1996, over 80 Russian submarines had been decommissioned and around 30 had been sunk off the Kola Peninsula in the Barents Sea.

Later, concerns about possible ocean discharges and the potential for economic damage to the fishing industry led Russia's close neighbor Norway to pursue a partnership that would resolve these and other environmental issues. As a result, senior defense environmental officials from Russia, Norway and the United States signed the Arctic Military Environmental Cooperation (AMEC) Declaration in 1996. Due to the military issues surrounding the project, U.S. Deputy Under Secretary of Defense Sherri Goodman designated Rear Admiral Andrew Granuzzo, Director, Environmental Protection, Safety and Occupational Health Division, Chief of Naval Operations as the AMEC functional lead for the United States.

A founding principle of AMEC was that the organization would seek to actively solve environmental problems, rather than just studying problems for future action. To meet this objective, AMEC is developing and implementing seven projects designed to allow Russia to reclaim radioactive and non-radioactive waste from its decommissioned fleet and dispose of the waste in an environmentally sound fashion. The nuclear submarine dismantling is part of the international Cooperative Threat Reduction program (CTR), which funds the majority of the effort.

AMEC's prototype 40-ton cask

One of the major issues in disassembling the subs is the handling, storage and transport of spent nuclear fuel. The first of the AMEC projects is the design and manufacture of a prototype cask for that purpose. With input from the Departments of Defense of each nation, the Russian Navy, Minatom's Nuclide, the U.S. Environmental Protection Agency and the Norwegian Defense Research Establishment, production of the prototype cask was completed in September of 1999. The cask was produced at the Izhorsk manufacturing facility in St. Petersburg, Russia. Official certification of the cask by Russian authorities is currently in progress, and CTR will begin purchasing additional casks once certification is complete. Each 40-ton capacity cask will be used for collecting spent nuclear fuel, interim storage of the fuel, and safe transport by rail to processing facilities.

"It's more cost-effective to get the casks produced in Russia, rather than having them built elsewhere and shipped," said Lt. Ragland. "The effort also provides jobs and food on the table for Russian engineers and workers."

Additional projects under AMEC include development of a storage pad for the casks; mobile technologies for treatment of liquid and solid radioactive waste; enhancement of solid radioactive waste storage facilities; safety training; monitoring techniques; and equipment for nuclear submarine dismantling. Non-radioactive waste projects include technology for cleanup of hazardous waste on Arctic military bases and "clean ship" technologies for the collection and processing of ship-generated waste. All current AMEC projects are planned for completion by 2001.

"Through partnership, AMEC is creating safe, equipment lifecycle processes that never existed in cold war-era Russia," said Lt. Ragland. "By addressing the environmental issues of Russia's northern fleet, we're enhancing the environmental security of the U.S. and our allies in the region and reducing the long-term threat to flora and fauna."

For additional information about AMEC, contact Dieter Rudolph at 703-418-5422.

(Reprinted from "Navy Earth Day News" April 21, 2000)

http://web.dandp.com/n45/ned2000/news_amec.htm