

Battelle serves **GOVERNMENT CLIENTS** in the

National Security, NASA, Environment,

Health and Human Services, and Transportation markets.

National Security

Battelle scientists are among the world leaders in concepts for medical defense against and treatment of exposure to chemical and bio-



Young Choi (left) and Hulbina Hirst work on a High Performance Liquid Chromatograph interfaced with a Mass Spectrometer at Battelle's West Jefferson, Ohio, facility. The instrument is used to analyze chemical warfare agent metabolites in samples of biological origin. It can detect and identify exposure to highly toxic materials used in chemical warfare at the part-per-billion level. The research at the West Jefferson labs is the centerpiece of Battelle's chem/bio work.



"Battelle's relationships with government clients span decades and continue to provide timely, affordable solutions to increasingly complex challenges."

— **Greg Frank**, Executive Vice President,
Battelle Government Market Sectors

logical weapons. Our research teams work in state-of-the-art laboratories that meet the highest standards of biological and chemical safety and security. They are developing and testing vaccines and therapeutic countermeasures for many chem/bio agents, including anthrax, that pose real and potential threats to public safety.

Our researchers also respond when needed to solve domestic problems like water quality. With the InStream™ device, we have developed a system to literally breathe life into previously dead waterways. By triggering water flow in stagnant pools, contaminated water is refreshed and once again becomes a suitable home for plant and animal life.

Battelle scientists at the Pacific Northwest National Laboratory led a cooperative effort to eliminate Department of Defense stockpiles of napalm from the Vietnam War. After three other contractors failed, Battelle provided a solution that overcame safety and environmental concerns, political sensitivities and public scrutiny that had followed the project since its inception. Our process not only disposed of more than 2.7 million gallons of the dangerous substance—on schedule and with an outstanding safety record—it also recycled the napalm and blended it with other industrial waste products to make a specification fuel with exceptionally high thermal energy value.

Battelle researchers, including (from left) Mark Koenig, Jim Worthington and Cliff Dodson, have developed a “curtain” that controls lithium hydroxide dust, used to absorb carbon dioxide generated inside a submerged and dis-

abled submarine. As an added benefit, the chemical reaction in the absorption process produces heat. Several curtains could be draped together to provide an artificial heat source to keep sailors warm until they can be rescued.

Battelle researchers and former submariners have applied existing technology to solve the problem of carbon dioxide (CO₂) buildup on disabled submarines for the U.S. Navy. The typical response is to spread lithium hydroxide crystals, which absorb CO₂, on a bunk or deck. One of the problems with deploying the lithium hydroxide is lithium hydroxide dust, which is a serious throat, lung and skin irritant. Our new “curtain” holds the crystals in long, cloth tubes porous enough to allow the crystals to absorb the CO₂, but restrictive enough to keep the lithium hydroxide dust out of the air. The curtains are inexpensive, tailored to fit existing lithium hydroxide canisters, and will be standard equipment in the U.S. submarine fleet by the end of 2002.

Battelle provides the Air Force with a full range of services from research and development to on-site technical support, including embedded software maintenance for the F-16, computer network support at the base level, and clothing development for the Air Force Clothing Office.

Battelle supports the Air Force migration to an information-centric business model by developing, implementing, and supporting enterprise logistics and financial data systems to improve workflow management and to streamline the procurement process through paper-





As the Air Force evolves to take on the challenges of the 21st century, Battelle continues to be a trusted partner providing innovative, affordable technologies and solutions in the areas of information

technology, electronics and avionics, advanced materials, chemical and biological defense, and environmental compliance and remediation.

less acquisition systems. Battelle supports state and local governments in automating business processes through IT insertion, and we develop and deploy data collection, transfer, storage and assessment systems for commercial clients to enhance their product and service offerings.

Battelle directly supports the Air Force warfighter by providing research and development in key technologies for applications includ-

ing the protection of electronic components in Air Force weapon systems against tampering, development of maintenance tools for low observable platforms, and signal data processing to provide automatic target recognition using advanced sensors.

NASA

Battelle continued to expand its federal technology transfer and commercialization activities for NASA, the Office of Naval Research, the Small Business Administration, and the EPA at its new Chicago offices. We'll soon help bring a state-of-the-art, high-performance/supercomputing work environment on-line to transfer



In 2001 Battelle formulated a teaming agreement with Boeing, Universities Space Research Association, and Futron to pursue the creation of a Space Station Research Institute.