

ENGINEERING SOLUTIONS

MSE Technology Applications, Inc. is a diversified engineering company that personalizes customer service within a high-tech framework. Delivering specialized engineering and unique technical solutions to government and commercial industries for nearly three decades, our customers have always come first. After completing thousands of successful projects across 45 states and several foreign countries, we are making a difference to those customers and to the technologies they use every day.

MSE specializes in cutting-edge research, design, and technical solutions for aerospace, energy, and waste treatment projects. We focus on solving unique customer problems with responsive, efficient solutions, combining our decades of experience and nationally distinguished engineers with new technologies and proven methods. Our commitment to helping our customers has established us as a multi-dimensional, nationally known company working on breakthrough technologies with a reputation for getting the job done successfully.



Delivering unique engineering solutions



MSE projects range from engineering design to security systems to military ordnance demilitarization to supervisory control and data acquisition systems to ultra-high pressure testing. We engineer solutions.

Engineering Solutions



Engineering – getting the job done successfully

MSE’s experienced professional engineers and scientists are critical to all our project successes. For three decades our dedicated staff has successfully delivered engineering services to private companies and government entities for industrial and commercial projects. Our engineering capabilities include mechanical, electrical, instrumentation and control, chemical, process, geotechnical, civil/structural, environmental, and cost and economic analysis. Whether it is remediation services, chemical testing, site cleanup/closure services, project management, or cost analyses, the years of experience and our disciplined approach allow our professional staff to deliver cost-effective solutions for our customers.

Mine Waste Cleanup – acid mine drainage cleanup solutions

MSE provides engineering solutions to national environmental issues resulting from the past practices of mining and smelting metallic ores. MSE manages the U.S. Environmental Protection Agency’s (EPA) Mine Waste Technology Program (MWTP). Regarded as a model of interagency cooperation between the EPA and the U.S. Department of Energy, MSE personnel identify, develop, and apply the most advanced technologies to treat waste and acidic waters from active and abandoned mine sites and milling operations. MSE has been extremely effective in selecting, evaluating, demonstrating, and transferring technologies to industry to prevent or mitigate hard rock mining impacts. In an industry where total remediation costs are estimated to be in the billions of dollars, MSE’s mine waste projects and technologies provide compelling, dynamic, cost-effective remediation solutions.

Site Cleanup/Closure Services – environmental remediation technologies and services

Within the Department of Energy Complex (as well as other commercial entities) there are a number of contaminated sites designated for cleanup and/or closure. Environmental issues surrounding these site cleanups and closures include environmental remediation and decontamination and decommissioning on an aggressive timescale consistent with safety requirements and applicable environmental regulations. MSE personnel provide valuable engineering services and resources to implement alternative technologies that enhance early site closure and/or address specific closure needs and long-term stewardship.

Facility Modernization – process engineering and instrumentation and control services

MSE has been working with the U.S. Department of Defense ammunition plants and troop-based facilities and enhancing them with new technology to secure high-tech infrastructures. MSE’s facility modernization projects strengthen these installations by improving capacity, efficiency, security, and stability. Specifically, we modernize and increase the efficiency of outdated processes, instrumentation and control systems, and chemical and materials handling. We have completed more than 100 projects at 26 Army installations, resulting in roughly \$20 million in cost savings.

Advanced Technologies



Aerospace – hypersonic and propulsion technologies

MSE’s internationally recognized team of aeronautical and aerospace professionals is successfully conducting cutting-edge research related to space transportation, subsonic/supersonic/hypersonic flight, and advanced propulsion and energy concepts. Current projects



hold the potential for revolutionary breakthroughs. Construction of a prototypic hypersonic wind tunnel at the MSE facility represents the most significant wind tunnel advancement in 50 years and the nation's only program of this nature. The hypersonic wind tunnel (when completed) represents the world's most advanced ground test capability to develop hypersonic flight systems and will ensure U.S. leadership in hypersonic flight technology.

MSE engineers developed and are demonstrating an automated control system for launch bar seating confirmation aboard USS Ronald Reagan (CVN-76). This project represents significant advancements toward minimizing the potential for loss of aircraft and personnel aboard aircraft carriers by enhancing the automation capabilities of the aircraft launch and recovery systems.

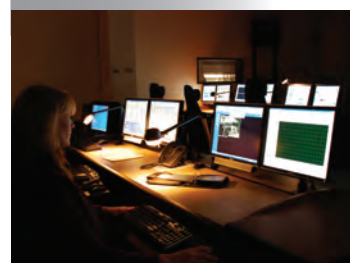
Demilitarization Technology – advanced waste and munitions treatment technologies

MSE has emerged as one of the premier companies in the plasma technology field. Plasma technology uses the intense heat of an electric arc to treat the most difficult wastes such as nuclear, military, and chemical waste. Working with the technology since 1989, our experienced engineers have successfully developed and deployed plasma technologies to resolve critical waste problems. We have provided two demilitarization systems to the U.S. Army and one system to Korea.

Industrial Automation and Control – SCADA products and instrumentation and control services

Providing essential services, Supervisory Control and Data Acquisitions (SCADA) applications have become part of the nation's critical infrastructure. MSE has been developing and enhancing SCADA systems and remote monitoring systems for 30 years. Our programmers and certified technicians design, develop, fabricate, and install hardware and software for industrial control systems. MSE-Tetragenics systems monitor and control several major dams and monitor one of the world's largest water storage and transport systems along the California State Aqueduct. We have installed systems in hydroelectric dams and electric substations in 27 states from coast to coast. With increasing security issues and advances in computer technology, our monitoring and control systems have become versatile, sought after, and cost-effective solutions.

Our engineers have more than 30 years of experience designing and integrating Supervisory Control and Data Acquisition systems and remote monitoring devices. Our systems monitor and control several major dams and monitor one of the world's largest water storage and transport systems along the California State Aqueduct. We have installed systems in hydroelectric dams and electric substations in 27 states from coast to coast.



Infrastructure Resources



Infrastructure –resources to test unique solutions

MSE owns and operates the nationally known Mike Mansfield Advanced Technology Center situated on a 53-acre site in Butte, Montana. The facility has the infrastructure in place to meet customer test requirements. The facility is a recognized testing site with equipment and systems available to manage, execute, and conduct projects from prototypic to full-scale development. This controlled-access facility is located near the intersection of I-90 and I-15, major east-west and north-south rail lines, and the municipal airport. We are also a UL508A Certified Panel Shop offering the latest in production techniques.

Information Technology – secure computer infrastructure

MSE is home to the Montana Information Technology Enterprise Center (MITEC), which provides IT services not only to MSE but a variety of industrial customers. MITEC serves as a central hub offering high-tech, secure data center services and technologically-advanced equipment to professional, government, commercial, and industrial businesses.



**delivering unique engineering solutions
and advanced technology to our customers
for more than 30 years**



Mike Mansfield Advanced Technology Center

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MSE is a certified small business with offices across the United States. We have worked in 48 states and several foreign countries. For more information visit our web site at www.mse-ta.com.

