



engineering **DESIGN**

General Engineering Services

Providing Specialized Engineering Solutions for more than 30 Years

- Full-Service Testing
- Onsite Sampling
- SCADA Systems
- Geotechnical Services

more than 30 years

COMMITMENT

INNOVATION

General Engineer Services for

DEVELOPMENT

MSE - Providing

EVALUATION

TECHNOLOGY

Engineering Services

MSE's large, multidisciplinary staff of engineering professionals, together with work control, project management, and budgeting systems, allow us to respond rapidly and appropriately to customer requirements. All major engineering disciplines, including chemical, mechanical, electrical, and civil are led by a licensed professional engineer (P.E.). We also maintain our own internal support services including drafting, surveying, laboratory, and document production to ensure high quality products.

- Mechanical Engineering
- Electrical Engineering
- Civil/Structural Engineering
- Geophysical Engineering
- Instrumentation & Control Engineering
- Chemical/Process Engineering
- Metallurgical Engineering
- Construction Management
- Geotechnical Engineering
- Economic/Cost Analysis
- Drafting
- Cost Estimating
- Project/Program Management
- Project Scheduling
- Environmental Engineering
- Risk Analysis
- Safety Engineering



Geotechnical Services

With more than 50 years of combined experience, MSE's Geoscience Group provides exceptional geotechnical engineering services:

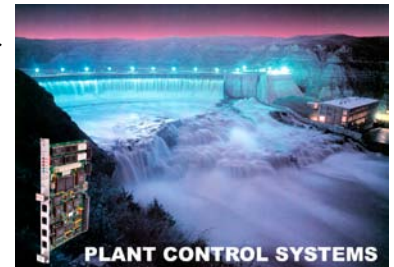
- Engineering studies/designs for buildings, dams, roads, bridges, pipelines, industrial and commercial development, mine sites, landfills, and hazardous wastes disposal sites.
- Geologic hazard and landslide potential investigations



SCADA SYSTEMS

MSE provides complete Supervisory Control and Data Acquisition (SCADA) systems, intelligent automation systems, monitoring and control systems, remote monitoring units, integration services, and computer-based products. We have delivered our products to communications companies and electric, water, and wastewater utilities throughout North America for more than 30 years. *In 1972, our SCADA department was part of the team that successfully synchronized and started a hydroelectric generator remotely for the first time--the Ryan Dam. This was the first time a computer was used to control a power plant.*

Specially suited to hydroelectric generator operations, our systems incorporate modules for generator synchronization; shaft speed sending; load, reactive power, pond level, and downstream flow control; and automatic reporting capabilities. For areas that require unattended plant operation, we provide a security verification feature that not only helps keep your site safe from intruders, but can also help troubleshoot site problems, monitor access, monitor water quality, detect chemical oddities, monitor air quality, etc.



PLANT CONTROL SYSTEMS

Geophysical Services

We offer geophysical methods for exploration and engineering. With more than 25 years experience, our geophysicists provide complete geophysical services:

- Seismic refraction and reflection
- Electrical resistivity, induced polarization, and self-potential
- Ground penetrating radar
- Gravity
- Magnetics and electromagnetics
- Borehole logging

**Drilling (GeoProbe) Services
Hydrogeological, Environmental, and
Remediation Services
Expertise and Certifications to Inspect**

Research and Development

MSE maintains a dynamic research philosophy that generates new concepts and ideas that have significant and lasting impacts on industrial practices and our customer's bottom line.

Advanced Energy and Aerospace

MSE's engineers are involved in some of the most advanced aerospace technology research in the United States. Each project possesses the potential for revolutionary breakthroughs in various aspects of aerospace technology and could dramatically reduce the cost of commercial and military operations in space. Some of the technologies we are researching include fuel cell development, carbon sequestration, bio-diesel plant design (electrical), hypersonic wind tunnel design and development, magnetohydrodynamics (MHD) power and propulsion technology, magnetic levitation technology, and AJAX Hypersonic Flight Vehicle Technology.

Qualified and Experienced Staff

MSE brings an exceptional group of technical specialists who have hands-on and practical knowledge of technology implementation at a project or task level. Our commitment to our clients is that the full technical depth and breadth of the team's professional base will be available and accessible in support of service requests. Our professional staff has many years of experience and we offer the multidisciplinary capability to handle specialized problems and situations. This creative resource base is available to support your projects.



Site Facilities

Research
 Computer Modeling Simulations
 Ultra-High Pressure Test Facility
 Adsorption testing
 Economic Analysis
 Fabrication
 Non-Destructive Evaluation
 Drafting
 Machine Shop
 Holding Ponds
 Solid Waste Handling
 Specialized Test Beds
 Specialty Engineering Services
 Process Demonstration Trailer

Engineering Services
 Cost Analysis
 Analytical Laboratory
 Diagnostics
 Soils Laboratory
 Yard Facilities
 Mobile Labs
 Mobile Unit
 Spray Casting
 Welding Shop
 Instrumentation and Control
 Soil Sampling
 Offgas Testing
 Information Technology
 Ultramicrobacteria Test Cell

Cryogenic Delivery System Pilot- Scale > Bench-Scale > Full-Scale Facilities

Engineering Resources

Registered Professional Engineers
 Registered Professional Geologists
 Certified Environmental Managers
 Certified Hazardous Waste Managers
 Registered Project Management Prof.
 Aerospace Engineers
 Biologists
 Chemical Engineers
 Chemists
 Civil Engineers
 Compliance Specialists
 Economists
 Environmental/Engineering Tech.

Electrical Engineers
 ES&H Specialists
 Geochemists
 Geologists
 Geophysicists
 Geotechnical Engineers
 Hydrogeologists
 Instrumentation & Control Engineers
 Information Technology Specialists
 Mechanical Engineers
 Microbiologists
 Process Engineers
 Project Managers

QA Specialists
 Soil Scientists
 Statisticians
 Structural Engineers
 Systems Engineers
 Technical Writers/Editors
 Technical Communicators
 Technicians
 Waste Management Specialists
 Water Resources Engineers
 Operations Specialists



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MSE Process Testing & Evaluation

Providing engineering solutions for 30 years.

We find engineering solutions for our customers. MSE headquarters are on 53 acres in Butte, MT, with offices in Richland, WA, Oak Ridge, TN, and Morgantown, WV.

