

ELEVENTH ANNUAL VENDOR/ CONTRACTOR PROFILE SPECIAL SECTION

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AREVA Engineering – Building on a Culture of Quality for Solutions Beyond

Obsolescence and reliability concerns continue to drive nuclear plant owners to implement digital upgrades for existing equipment. Implementation of these upgrades can help eliminate problems such as lack of spare parts and issues with critical components.

AREVA provides quality engineering solutions to lower risk, increase reliability and improve plant performance through Framatome ANP, an AREVA and Siemens company. Our Engineering team leverages its global competencies and technology to deliver solutions that exceed customers' expectations and lower overall project cost.



For more information about AREVA in the U.S., visit www.us.aveva.com

With a culture built on quality, Framatome ANP knows that our success depends on your success – and we deliver results that make a difference. For example, the company recently completed a highly successful first-of-a-kind Digital Control Rod Drive Control System upgrade and installation at a U.S. nuclear unit.

“Our success as a major supplier is to ensure a quality culture in our workforce, products, and services. We call it **Solutions Beyond**. It's what our customers have come to expect when looking to improve their plant performance and reliability – while keeping the costs down. Our customers depend on it,” said Tom Weir, Senior Vice President of Engineering for Framatome ANP, Inc.

As your ally in providing safe, clean and affordable nuclear energy, our Engineering team unites with customers to tie profitability to project performance and overall plant performance metrics. In fact, our alliance partners are recognizing that the benefits of achieving mutual goals far outweigh the risk and uncertainties of transactional-based relationships.

With expertise across all areas of the plant, Framatome ANP has the right resources to offer engineering for instrumentation and control and

MAJOR PROJECTS INCLUDE:

- I&C reliability and obsolescence management
- Integrated electrical system upgrades
- Major system installations or modifications
- Balance-of-plant engineering
- Total motor solutions
- Life cycle management
- License renewal
- Regulatory interface

electrical systems, major component replacements, spent fuel management, nuclear steam supply systems, fire protection and reliability improvement programs. Our reactor systems design heritage is combined with balance-of-plant engineering from a practical plant operations and maintenance perspective. In addition, we have the field installation, maintenance and startup/testing experience to seamlessly integrate any project from conceptual design to operational reality.

We are committed to providing a comprehensive solution to meet your specific, overall plant needs with proven engineering, solid project management and precise execution. To learn more, visit the Engineering section of the Framatome ANP website at www.us.framatome-anp.com.



KEY QUESTION FOR THE FUTURE

How will you **improve plant performance** with dated I&C and Electrical equipment?



You have challenges.

AREVA has proven solutions that make good business sense.

In North America, the AREVA group provides I&C and Electrical Systems solutions through Framatome ANP, an AREVA and Siemens company. We know how to enhance plant performance, from system-specific upgrades to comprehensive packages. You get exactly what you need, the way you want it - that's the solution beyond. www.areva.com

Framatome ANP, Inc. – **Celebrating 50 years in Lynchburg, VA!** – www.us.framatome-anp.com



AREVA

It's no accident. Central Research Laboratories (CRL) has been the global leader in direct manipulation of nuclear materials for more than 50 years. How? By creating effective solutions to difficult problems in the absolute world of toxicity.

A little history

CRL of Red Wing, Minnesota has been designing, developing and manufacturing equipment and systems for the nuclear industry since the 1940s. Over the years, the company has accumulated more than 100 patents, and installed more than 8,000 units in 26 countries.

Extending a hand

CRL established its leadership presence in 1950 with a breakthrough telemanipulator design. Telemanipulators function as an extension of the human hand. CRL has 15 different models to manipulate hazardous materials in situations where direct contact isn't safe for people or for the environment, and when finger-like dexterity and feel ("force-feedback") are needed. Without telemanipulators, important activities ranging from nuclear waste cleanup to preparation of radiopharmaceuticals for medical procedures would be more difficult, costly, and dangerous.



It's no accident: Central Research is the leader

Touting the line

In addition to the telemanipulators, CRL's principal product line includes:

Double-Door Sealer Transfer System — Used for transferring items and materials in or out of sealed enclosures, allowing rapid and repeatable transfers without breaking containment of the enclosure or the transfer container.

Sealed Pass-Through Enclosure System — A means of providing a sealed penetration into an enclosed volume using a glove, window, bag, plug, or ball manipulator and maintaining the integrity of the enclosed volume during a replacement or transfer procedure.

Drum Transfer Systems — Bagging and bagless transfer of hazardous materials using industry-standard drums.

Service with a style

Products are important. No question. But so is service. CRL provides complete before- and after-sale service for all products, including:

- Engineering assistance to ensure proper layout, installation, and operation
- On-site installation support
- On-site field service (repair and maintenance) of all CRL equipment
- Factory repair and refurbishing
- Complete spare parts availability
- On-site or factory training on equipment maintenance and operation
- Technical support for the life of your equipment

Again, CRL didn't take the industry lead by accident. Rather, it has earned it every day for more than a half century by providing the best solutions to difficult problems in the absolute world of toxicity.

CENTRAL RESEARCH LABORATORIES

Red Wing, Minnesota 55066
651-388-3565
www.centres.com
FAX 651-388-1232



BARTLETT

People • Services • Products

Our Extensive Product Line of Radiological Solutions Includes:

- ▶ Portable HEPA Ventilation Systems & Vacuum Equipment
- ▶ Automated Monitoring Systems
 - Remote Monitoring System
 - Handheld Survey Technology
- ▶ Other Materials/Equipment
 - Super Sleever
 - Nuclear Mastr-Pump
 - Inflatable Containments
- ▶ Coatings
 - Stripcoat TLC Free™
 - Polymeric Barrier System (PBS)
 - Fogging Technology
- ▶ Decontamination Equipment
 - Wall/Floor Shavers
 - Blast Wizard
 - PlasBlast Systems
 - Scabbling Equipment
 - Hydrolasing Equipment

Featured Product: Portable Ventilation Systems

Bartlett offers nuclear-grade HEPA systems to maintain air quality during activities that have the potential to create airborne contamination. We offer full design capabilities up to 10,000 cfm. To complement our ventilation systems, a full range of replacement parts and accessories are available; such as filters, mufflers (HEPA Muzzler), and incinerable ducting (Radflex).

AP-500 (Our newest model, shown below)

AP-500 FEATURES:

- Compact
- Lightweight
- Portable
- Easy to Operate
- Minimal Setup Time



*The AP-5000
HEPA Model*

*The AP-500,
shown in
multiple
operating
positions*



*60 Industrial Park Road, Plymouth MA 02360 • (800) 225-0385, Ext 1136 or 1264 •
www.bartlettinc.com*

Petersen's Reputation Continues To Grow Among The Industry's Giants.

Petersen Inc. Staff Provides Design Engineering, Value Engineering, Project Management And Construction Services To A Variety Of Customers.

In business since 1961, PETERSEN INC. has become one of the foremost manufacturing facilities in the United States, serving customers throughout the world. With large capabilities and tremendous capacity, Petersen Inc. effectively serves industry giants. Satisfied Customers include: ATK Thiokol Propulsion, Autoliv, Bechtel, BNFL, Boeing, Fluor, Kennecott, Westinghouse, Washington TRU-Solutions, and we were recently awarded the SBA Region VIII Small Business Subcontractor of the Year.



The Petersen Inc. facility houses over 260,000 sq. ft. and some of the latest fabrication and machining equipment in the market today. Petersen Inc. offers state-of-the-art equipment with crane capacity of 75-tons and 25' under-hook height, which allows handling of virtually any project. In addition, Petersen Inc. dedicates more than 1.2 million sq. ft. to warehousing and distribution. The facilities have convenient interstate and rail access to minimize transportation costs.

Petersen Inc. precision machining division specializes in close-tolerance machining for large and small applications. Climate controlled facilities, state-of-the-art equipment, and skilled machinists and toolmakers assure quality, on-time products and services. Petersen Inc. machining operations consist of both large and small CNC multi-axis equipment. Machines are capable of turning 15' dia., 10' under the rail, as well as CNC turning in the 6' and 8' ranges. Petersen Inc. offers some of the largest CNC horizontal machining in the industry: 12' ver. X 32' horiz. And 8' vert, x 28' horiz., with additional machines in the 8' range. Petersen Inc. small precision machining facility

consist of 90+ machines with multi-axis CNC milling, turning centers and EDM capabilities - both wire and sinker.

In 2001, Petersen Inc, received the NRC Quality Certification (NRC Subpart H of 10CFR71) and has since completed work for Bechtel, British Nuclear Fuels (BNFL), Fluor Fernald, Fluor Hanford, Kaiser Hill - Rocky Flats, Los Alamos National Lab, Nevada Test Site, Savannah River, WTS - Carlsbad, and others. In 2002, Petersen Inc. also received a contract to build Standard Waste Boxes and Ten-Drum Over Packs. This agreement allows fabrication, storage, and shipment of SWB's and TDOP's to any D.O.E. customer purchasing them through Washington TRU-Solutions. And in 2004, Petersen Inc. was awarded the LAW and HLW Melters by Bechtel, to be used in the Richland D.O.E. RPP Project.

Petersen Inc. is also a multi-disciplined engineering design and management firm providing design, fabrication, and installation support to companies world-wide. Using Solid Edge(r), CAD Key,

and AutoCad, the Petersen Inc. staff continues to provide design engineering, value engineering, project management and construction services to a variety of customers. Wide-range capabilities, extensive fabrication and machining experience allow Petersen Inc. to offer real-world solutions that will enable you to obtain your goals.



PETERSEN
INCORPORATED
"A Winning Combination."

ASME U&R • NQA-1 • NRC 10 CFR PART 71

www.peterseninc.com • 1-800-410-6789 • 1527 North 2000 West, Ogden, UT 84404

We started with one man and a two-car garage...

www.peterseninc.com • 1-800-410-6789



...now our "garage" could hold 69,523 cars.

The Petersen Inc. facility now includes over 260,000 sq. ft. and some of the latest fabrication and machining equipment in the market today. In this vast facility Petersen Inc. produces technically advanced NQA-1 projects for the nuclear industry such as Shield Doors, Glove Boxes, Containers, and Fuel Transfer Systems. Bechtel National Inc. recently awarded Petersen Inc. the Melters contract for the Hanford River Protection Project, Waste Treatment Plant (RPP/WTP). In addition to the fabrication facility, Petersen Inc. dedicates more than 1.2 million sq. ft. to warehousing and distribution.



ASME U&R • NQA-1 • NRC 10 CFR PART 71

1527 North 2000 West, Ogden, UT 84404

Partnering: Sharing a Commitment to Excellence

ENERCON has mastered the ability to work in partnership with our clients to help achieve strategic corporate goals to maintain high plant availability, to enhance plant performance and effectively control generation costs.

ENERCON is continuing to adapt and grow in the changing nuclear services marketplace. The Company has entered into innovative performance-based contract arrangements that provide incentives to exceed customer expectations and penalties for failures to fulfill commitments. The Company is using risk-sharing to assure that ENERCON's goals are completely aligned with our clients' goals. In addition, ENERCON is forming teams that integrate specialized expertise with the Company's Core Technical Capabilities to address the full spectrum of client needs.

New Nuclear Plants

ENERCON is currently supporting the nuclear power industry's preparation for the next generation of nuclear plants. ENERCON is unique among engineering service firms in having substantial technical capabilities in design, licensing, regulatory affairs and environmental services. ENERCON achieved substantial efficiencies in preparing the ESP Application for Entergy Nuclear Potomac as a direct result of having the capabilities to prepare both the Safety Analysis Report and the Environmental Report and assure that the entire ESP application complied with NRC licensing requirements and guidance documents. In addition, ENERCON's experience in preparing the ESP Application, combined with our support for development of the COL Application Guidelines for NEI provide us with particular breadth and depth in 10 CFR Part 52. Most recently, ENERCON completed a comprehensive study for Duke Power to develop a detailed work breakdown structure, cost estimate, and schedule for all activities necessary to prepare a COLA, submit the application to the NRC and obtain an NRC combined operating license. A critical part of this study was providing recommendations to Duke Power on the process for selecting a reactor technology. In addition, the study required a careful evaluation of the potential interface between the reactor technology provider and a contractor tasked with preparing the COL application. As a result, there is no company in the United States that has more insight than ENERCON into the details of the work required to procure and license a new nuclear power plant in the United States.

Operating Plant Services

Generation Enhancement

ENERCON is supporting clients by adding electrical output from existing nuclear power plants. This includes detailed studies of heat rejection from plants and improvements in cooling system performance through upgrades to current cooling towers or addition of supplemental cooling capabilities. ENERCON is currently completing design work to support installation of a new "helper tower" at an operating nuclear power plant that will help the plant uprate its electrical output by approximately 45 megawatts.

Independent

Spent Fuel Storage Installations

ENERCON is providing engineering and licensing support for design and construction of Independent Spent Fuel Storage Installations at commercial nuclear power plants. ENERCON is providing analytical support to address complex seismic design issues as well as general civil/structural, mechanical and electrical design support. ENERCON is also helping to develop comprehensive licensing submittals demonstrating that proposed installations meet regulatory requirements.

Safety Analyses

ENERCON provides support for a broad range of safety analyses including structural calculations, thermal hydraulic analysis, fluid flow analysis, pipe stress calculations and subcompartment temperature and pressure analyses. ENERCON performs sophisticated system modeling to evaluate transient behavior and optimize plant performance. ENERCON can provide analysis support for a broad range of plant initiatives including power uprate, license renewal, digital controls upgrades, and changes in nuclear fuels suppliers.

Licensing and Regulatory Affairs

ENERCON's staff includes experienced licensing professionals with a utility perspective. ENERCON has a solid track record of developing innovative solutions that provide cost effective and timely resolution to complex regulatory issues. ENERCON's staff has extensive experience in working with the NRC staff to support review and approval of proposals. ENERCON's experience includes comprehensive verification and validation of existing SARs, definition of plant Current Licensing Basis, preparation of license amendment request

packages, and implementation of changes in plant programs to address evolving regulatory requirements such as the revised 10CFR 50.59.

Decontamination and Decommissioning

ENERCON is currently supporting decommissioning at four power reactors. This support includes licensing and regulatory affairs, radiological operations, project management, and decommissioning operations support. In addition, ENERCON is a leader in supporting decommissioning of NRC materials licensees and has helped clients successfully terminate NRC licenses and obtain unrestricted releases for site property. ENERCON's role in providing effective safety and health oversight of decommissioning activities has been recognized by the NRC under a recent pilot program.

Engineering Modifications

ENERCON provides a broad range of design services to nuclear power plant operators across the country. This includes total scope design of plant modifications including equipment replacement, system improvements, resolution of operating problems, and resolution of regulatory issues. ENERCON provides support in all engineering disciplines including civil/structural, mechanical, electrical, instrumentation and controls, HVAC, and fire protection. ENERCON provides comprehensive design support from requirements definition through preparation of specifications, installation drawings and bills of material.

Operating Plant Support Services

ENERCON provides extensive support for ongoing nuclear power plant operations. This includes assistance in optimizing operations and work controls, operator and plant staff training, quality assurance, outage planning and management, and maintenance program optimization.



Finding Innovative Solutions.

800-735-7693



The last generation of nuclear power plants
had to learn the hard way.

You don't.

LET ENERCON HELP YOU PREPARE FOR THE NEXT GENERATION.

SERVICES LIST

Engineering
Regulatory Compliance
Procedure Development
Risk Management
Custom Software Development
Equipment & Systems Specifications
Contracts & Proposals
Maintenance Program Design & Optimization
Systems Enhancement
Operations Consultation
Programs Development
Design Studies & Implementation
Plant Organization Analysis
Data and Document Control
Records Management
Licensing
Construction Management
Environmental
Site Permitting

The push is on to develop new nuclear power plants in the U.S. And so is the pressure. More than anyone else, we understand that it takes more than a mandate to get from raw land to a safe, smoothly running plant. And we also know how to keep it running that way.

For over two decades, Enercon has provided engineering or technical services to virtually every nuclear power plant in the United States, serving both PWR and BWR clients. And for the past 25 years, we've been a premier provider of engineering design, analysis, environmental, and licensing support services to our operating nuclear power plant customers. We are uniquely knowledgeable of the design, operational, and regulatory issues that have affected plant operations and performance. In addition, we have developed substantial insights into how design and configuration management affect operations, maintenance and life cycle costs for our operating nuclear power plant customers.

We have a solid reputation for innovation, excellence and responsiveness. And we would be happy to provide you with a list of clients who have helped us build that reputation. Give us a call and tell us what you need. And we'll get you up and running.



5100 East Skelly Drive | Tulsa, OK 74135 | 800-735-7693 | enercon.com

ROV Expands to New 60,000-Foot Facility

ROV Technologies, Inc. proudly announces the opening of our new 60,000 square foot Engineering, Manufacturing and Contaminated Equipment Processing Facility. The new facility located in Southern Vermont is minutes from an Interstate Highway and only an hour's drive to a major airport. Purchased with the intent of better serving our Nuclear Clients the new facility enhances our present operations by doubling our machining capability, expanding the area utilized for R&D work and most importantly the addition of space dedicated to refurbishment and warehousing of contaminated robotic and surveillance equipment.

Contaminated Equipment Processing Facility:

ROV Technologies recently applied for and received an NRC license to receive, acquire, possess and transfer special nuclear materials (SNM). With the license in possession, ROV Technologies has undertaken the required steps necessary to prepare the site, author process control procedures, acquire Radiation Protection survey and monitoring equipment and implement the program.

Site Preparation:

To prepare the facility for contaminated equipment refurbishment, warehousing and shipment the following was completed:

- Approximately two acres of land adjacent to the facility were security fenced with "chain-link" fencing with locked gates and appropriate placarding. This area will be used to store sealand vehicles for transporting equipment.
- A Security plan was established that includes locks on all exterior doors and gates, a keypad identification system on the personnel entrance, as well as a remote video surveillance intruder alert system. All ROV personnel will wear identification badges and visitors will be registered and escorted.
- The radiation controlled area (RCA) inside the building was coated (floor and walls) for ease of decontamination.
- An environmentally controlled inner building enclosure has been fabricated from stainless steel to provide the contaminated equipment refurbishment and testing center. The enclosure is strategically placed within the RCA for optimum access and egress of shipments. The workspace within the enclosure is fitted with workbenches, power receptacles, overhead lighting and dual HEPA filters

(capable of changing the air completely every two minutes). A double door in the enclosure allows ease of entry with shipping containers as large as B25 boxes (by fork lift)

Process Control Procedures and Survey/Monitoring Equipment:

To establish the programs and process control procedures necessary to become a Licensee and operate a contaminated robotic equipment rental and repair center successfully; ROV Technologies has hired a full time Radiation Protection Safety Officer (RSO). The RSO authored thirty procedures to provide guidance and direction to the Radiation Protection Technicians (RPT) and Robotic/electronic Technician personnel that will work within the controls of the ROV Program and NRC License via RWP. The RSO is responsible for supervision of RP Technicians, aspects of NRC license compliance and all shipping and receiving operations. ROV Technologies has purchased the RP survey and monitoring equipment necessary to meet the requirements of the program and has established contracts with contaminated laundry, waste disposal and other vendors as required.

Program Implementation:

ROV has retrieved all of the Robotics Rental Program equipment previously stored in various places, staged the equipment in either the contaminated or non-contaminated storage areas (as applicable) and is in the process of completing a master inventory and equipment status data base that will aid in expeditious response to clients needs. ROV Technologies can now offer a true 24/7 emergency response to client's requests for contaminated equipment and services as well as the following standard scheduled services:

- Ship LSA status equipment by contract shipping vendors - air or land
- Ship LSA status equipment utilizing DOT licensed ROV Technologies drivers and vehicles
- Pick up and delivery of customers LSA status equipment for repair or calibration, i.e. cameras, meters, robotics, etc.
- Interim storage and categorization of clients LSA status equipment such as scaffolding LSA containers, etc.
- Rebuilding and/or repair of clients LSA status electrical, electronic and mechanical equipment, motors, pumps, etc.

Machining, Assembly and Welding:

Machining:

Prior to moving our machining operations from our existing shop to the new facility we purchased and installed enough new milling and lathe equipment in the new facility to ensure there would be no "down time" during the transition. This will ultimately result in doubling our machining capability. Immediate plans are to also install machining equipment into our contaminated work area to offer "hot shop" services to our clients.

Assembly:

The new component assembly area is approximately ten times the size of the one previously used and features multiple work stations as well as tiered storage racks for warehousing of materials and completed components.

Welding:

The new facility features a large area totally dedicated to welding and cutting operations. The metal working equipment includes steel workbenches and equipment to cut and weld aluminum, stainless and carbon steels. Immediate plans include welding services and procedure development in our Contaminated Work Area.

Research and Development

Research and Development (R&D):

The new facility has ample room for layout of mockups and structural components to be used as either test fixtures for R&D or training aids for manual dexterity performance evaluation and skill enhancement. At this time, at the new facility, there is a jet pump supported in a reactor vessel annulus cross sectional fixture complete with a steam dam and core spray header. This fixture is presently being utilized in the development of annulus inspection devices. In addition there is an under head mockup used for development of equipment for guide funnel inspection and welding as well as operator proficiency. Located in the original manufacturing facility, ROV also maintains an eighty thousand gallon wet cavity/vessel mockup for R&D and operator training on underwater vehicles.

For further information contact:

Mr. John J. Judge
Mr. Michael L. Trombley
Mr. Richard G. Mossey
Mr. Brian F. Quinlan

At telephone number 802-254-9353 or E-mail to mail@rovtech.com.

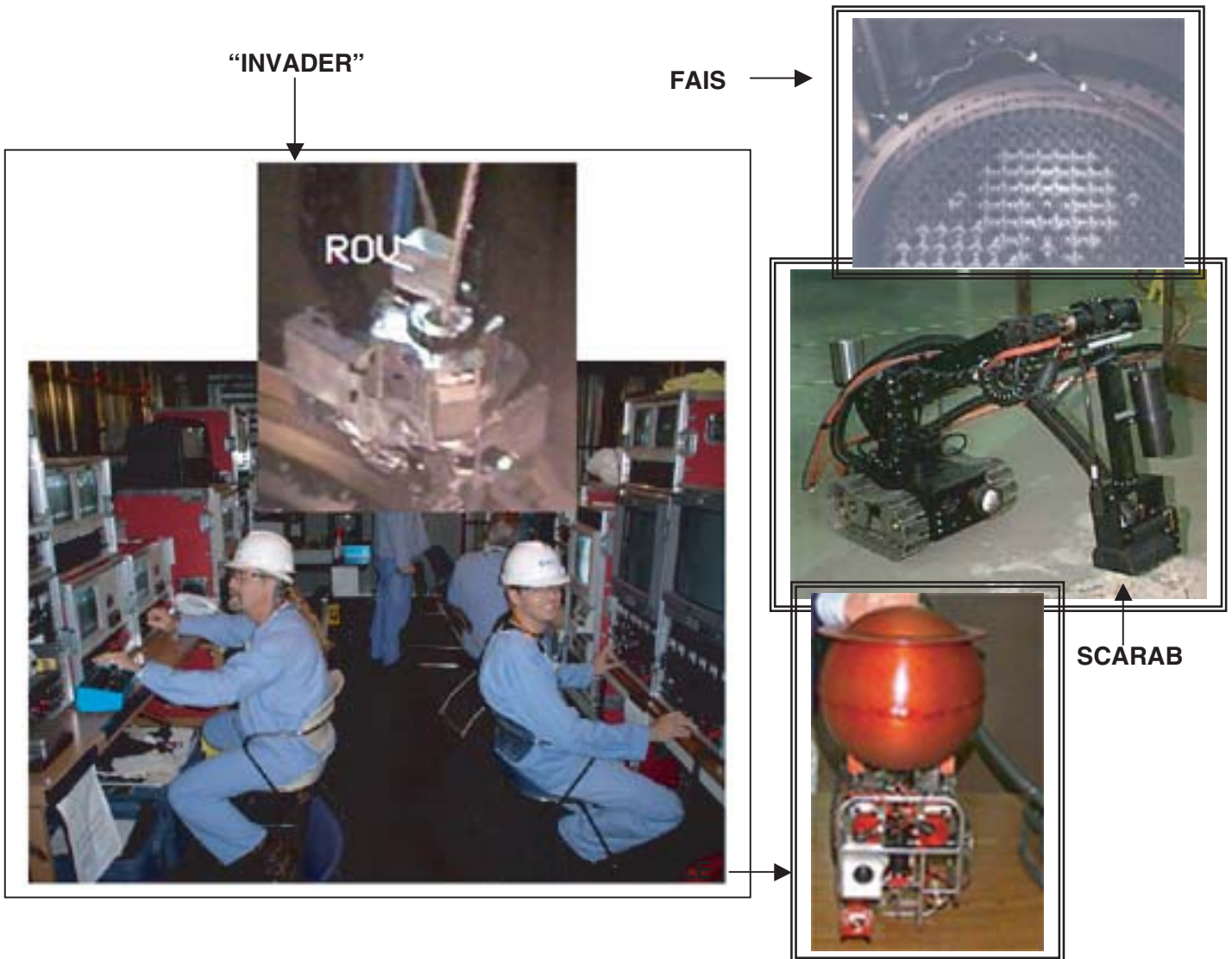


Nuclear Underwater Equipment
SALES AND SERVICE

Developed by Nuclear Professionals

**“Not Built for Beauty,
Built to Work Tough”**

Since 1989 we have been designing, building, operating equipment, and providing service exclusively for the nuclear and space industries. Our goal, to reduce critical path time and save radiation dose exposure, has been realized with every new product from our line of Scarab crawlers, submersibles, radiation tolerant camera systems, our highly acclaimed Fuel Assembly Inspection System (FAIS) and scores of special purpose equipment to our newest innovation, the “INVADER” (In-Vessel and Annulus Data Evaluation Robot).



Contact us today for information on our complete line of products for purchase or rental at:

R.O.V. Technologies, Inc.
616 Franklin Road
Vernon, VT 05354

Tel: 802-254-9353 • FAX: 802-254-9354 •

E-Mail: mail@rovtech.com • URL: <http://www.rovtech.com/>

Westinghouse Electric Company LLC

Customer **1st**

Westinghouse Electric Company LLC, has a long-standing commitment to excellence in commercial nuclear reactor technology.

Today Westinghouse represents the largest worldwide nuclear operations experience base and its technology is the basis for nearly half of the world's nuclear power plants, many of these being top operating units by capacity factor.

Keeping the Customer 1st initiative in the forefront, our 8,000 dedicated employees are committed to customer success and are focused on listening and responding to specific customer needs.

With locations across the globe, the three core businesses of Westinghouse are combining years of wisdom and experience with the youthful energy of today's up and coming nuclear energy professionals.

At Westinghouse, we're proud to be part of the global nuclear energy industry, and we're ready to respond to the challenges yet to come in securing our energy future by providing clean, reliable and economical nuclear power.

NUCLEAR SERVICES

With primary locations throughout the United States and Europe, Westinghouse Nuclear Services' wide range of products and services provide global solutions with a local focus to help keep nuclear power plants operating safely and competitively worldwide. Westinghouse Nuclear Services works closely with customers in three essential areas: field services, engineering services, and repair, replacement and automation services.

NUCLEAR FUEL

Westinghouse Nuclear Fuel is a leading integrated supplier of nuclear fuel products and services. Using global capabilities, Westinghouse Nuclear Fuel supplies products, services and technology to PWR, BWR, VVER, AGR and Magnox fuel customers.

NUCLEAR POWER PLANTS

Westinghouse Nuclear Power Plants specializes in plant design, systems engineering, component design, equipment manufacturing and project management for new nuclear power plant projects worldwide.



Westinghouse Electric Company LLC
www.westinghousenuclear.com

Comanche Peak nuclear power station



*Ric Pérez
Vice President
Field Services
Westinghouse Electric Company*

*Rafael Flores
Vice President
Nuclear Operations
TXU Power*

Committed to customer success.

“The Comanche Peak team displays pride in their work every day, but our pursuit of excellence does not allow us to be satisfied. The Westinghouse team has helped us to strive for excellence in outage execution.”--Rafael Flores

A strategic goal of the alliance between Westinghouse and TXU Power's Comanche Peak staff is to reduce the plant's outage durations to improve production costs.

In fact, Westinghouse committed one of our Customer 1st experts, Ric Pérez, to address this goal.

Working with Rafael Flores and the Teaming Executive Board, Ric led a team of Comanche Peak and Westinghouse employees in applying Six Sigma and Lean tools to determine where and how the outage startup could be reduced by 2 to 3 days.

As a result, efficiencies during the startup have been targeted to move the plant from Mode 4 to 100% MWe within an optimized schedule, keeping Comanche Peak as one of the top performing plants in the United States.



Westinghouse Electric Company LLC
A BNFL Group company
[www.westinghouse**nuclear**.com](http://www.westinghousenuclear.com)



The Single Source for Engineered Solutions

A clientele that includes 90% of the U.S.'s nuclear plants as well as facilities in Canada, Mexico, Brazil, Taiwan, Korea, Slovenia and the former states of the Soviet Union says a lot. In just over a decade Nuclear Logistics Inc. (NLI) has excelled in servicing the nuclear industry, becoming the global leader of third party Class 1E supply and a forerunner in safety-related equipment maintenance. With the finest engineers in their fields, extensively trained technical personnel, and strategic industry-related partnerships with respected, established companies, NLI is able to offer turn-key solutions to any challenge involved in nuclear power plant operations.

PRODUCTS AND SERVICES

NLI provides an incredibly extensive line of Class 1E products, many of which are pre-qualified. Besides being an OEM and manufacturing in-house, NLI is also the authorized supplier of products from various companies, controlling configuration, design and manufacturing of each product. Additionally, NLI is actively involved in the development of innovative equipment such as the MASTERPACT® Low Voltage Replacement Breaker.

NLI's host of products are complemented by an equally impressive list of services. Assisting clients with routine requests or custom orders, on-site or in-house, NLI's extensive experience allows them to update and upgrade any system within a nuclear facility.

QUALITY ASSURANCE AND ASME III CERTIFICATION

At the company's inception, NLI developed a stringent Quality Assurance Program that has since become the international standard. Emphasizing the company's commitment to excellence—especially as it pertains to safety-related projects—every single requirement is met and surpassed. And, all NLI projects are subject to the QA Program, whether on-site, in-house, or at another facility.

NLI augmented their impressive QA Program with an ASME III Certification for Section III, Division I, covering Class 1, 3, and 3 Valves and Pressure Vessels, with N-Stamp for Valves, Pressure Vessels and Pumps, NS-Stamp for supports, and NPT-Stamp for all parts as required. By achieving this accreditation, NLI joins the select few companies that are able to comply with the strict ASME III regulations.



NUCLEAR LOGISTICS INC

**www.nuclearlogistics.com
1.800.448.4124**

INDUSTRY EXPERTISE

Obsolete equipment. Custom OEM. Reverse engineering. Modification of "off-the-shelf" components. Digital upgrades. On-site life extension programs. NLI's undisputed area of expertise is safety-related application. Whether its analysis of failure modes, identification of critical characteristics, or testing and qualification, NLI is the nuclear industry's single source for safety-related equipment, equipment maintenance, and total engineered solutions.



One is all
your plant
needs.

**nuclearlogistics.com
800.448.4124**

MASTERPACT® is a registered trademark of Square-D/Schneider Electric.

The global leader of third party Class 1E Supply, and a forerunner in Class 1E equipment maintenance.
Proactive development of innovative equipment such as the MASTERPACT® Low Voltage Replacement Breaker.
Strategic alliances with first rate companies.
An extensive line of products that address routine needs and custom requirements.
Comprehensive services that range from on-site life extension programs to in-house testing and qualification.
A Canadian facility to better serve CANDU plants.
And a Quality Assurance Program that is ASME III Certified, Division 1, Class 1, 2 and 3 "N" Stamp.

All from one company.



NUCLEAR LOGISTICS INC

**The Nuclear Industry's
Single Source for Engineered Solutions**

Nuclear Programs Fuel Major Tool & Machine's Growth

Our Present...

Since 1946, Major Tool & Machine, Inc. has been providing engineering, fabrication, machining, assembly and testing services for critical application environments. Our customer-focused philosophy, coupled with continuous reinvestment in our capabilities, facilities and employees, has enabled us to evolve with and respond to the needs of our customers. Major Tool's best value approach provides our customers with the highest quality, competitively priced build-to-print services available.

Major Tool provides unsurpassed levels of capability and quality assurance. Maintaining over 300,000 sq. ft. of environmentally controlled manufacturing space under roof, Major Tool offers extraordinary capacity. Our continuous reinvestment in capital equipment allows us to provide prototype through production forming, welding, machining, assembly and testing services to meet the wide range of application specific shape, size and

configuration hardware required by the nuclear industry.

Our ability to execute this full spectrum of manufacture has allowed Major Tool to successfully participate in many critical government, industry and academia sponsored fission and fusion programs. In fact, Major Tool has been honored by our selection as U.S. Department of Energy Oak Ridge National Laboratory 2003 Small Business of the Year.

Our extraordinary capability, capacity and experience are driven by our commitment to quality assurance. Major Tool maintains ASME N, NPT, N3, U and U2 certifications. Our Quality Assurance System is audited to ASME NQA-1, and is NRC 10CFR50, 10CFR71 and 10CFR72 compliant.

Your future...

It is bright on the nuclear energy horizon. Major Tool is committed to our future, your future, and the future of our generations by championing the growth of nuclear energy and the

safe, successful remediation and disposal of radioactive waste.

We are well positioned to usher in the nuclear renaissance, and we will continue to apply all our resources and knowledge to provide our customers the quality critical hardware necessary to meet tomorrow's demanding nuclear requirements.

Nuclear power plant upgrades, next generation power plants, naval nuclear, radwaste transportation and disposal casks, canisters and tooling, fuel fabrication, magnetic and inertial fusion, and government, industry and academia supported energy sciences initiatives are all areas where Major Tool applies our hardware manufacturing expertise.

We look forward to the bright future that nuclear energy provides us all.

For more detailed information, or to schedule a visit to Major Tool & Machine, contact Joel Manship at (317) 917-2619 or by email at jmanship@majortool.com



Major

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MTM's Quality Assurance Program is compliant to NQA-1, 10CFR50 Appendix B, 10CFR71 Subpart H, 10CFR72 Subpart G












EXCEL SERVICES CORPORATION

Enhancing Safety • Improving Performance • Reducing Costs

For twenty years, EXCEL has delivered innovative solutions to our clients worldwide that have enhanced the safety, improved the performance, and reduced the cost of operating their nuclear facilities. EXCEL's continued partnership with our client's goals has enabled us to consistently provide the highest quality of services. EXCEL continues to adapt and grow in the ever-changing nuclear services marketplace so as to be better aligned with the needs of our clients. Some of our major current services include:

Regulatory and Licensing Services

EXCEL is the industry leader in helping nuclear facility licensing organizations address new regulatory requirements, special improvement programs, and complex technical and licensing issues.

EXCEL is the recognized leader in facility specific conversions in Improved Technical Specifications (ITS). We have demonstrated to regulators and utilities the lasting benefits in facility safety and performance achieved by aligning upgraded licensing basis documents, Technical Specifications, as well as facility operating processes, programs, and procedures. This enhanced licensing basis resulting from ITS is a core element of facility life extension and decommissioning activities.

EXCEL has also provided industry leadership in the licensing of the first US commercial gas centrifuge enrichment plant under 10 CFR Part 70 through the involvement of our experienced personnel in the development and licensing of National Enrichment Facility.

EXCEL is providing industry leadership in the licensing of new nuclear facilities under 10 CFR Part 52 through the involvement of our experienced professionals in the initial Early Site Permit and Combined License Applications, and the industry task forces related to these new processes.

Risk Informed Regulations and Technical Specifications Support
Plant Life Extension and License Renewal
Improved Technical Specifications

Plant Safety Evaluations and Safety Analyses
Final Safety Analyses Report Development and Update
Spent Fuel Storage Facility and Dry Cask Storage Projects
Plant Decommissioning
Nuclear Safety and Licensing
Regulatory Compliance and Support
Authorization Basis Development and Updates
Hazards and Safety Analysis
Operator and Issue Training
Quality Assurance
Surveillance Testing

Management and Consulting Services

Simplicity, flexibility, and cost-control with full regulatory compliance are key to becoming more competitive. EXCEL works with clients to re-examine the underlying infrastructure of facility management organizations. Authority, responsibility, and resources are systematically defined, refined, and applied.

The development of tools to gather and analyze information is essential to advanced facility operations. EXCEL uses the latest industry tools and management processes ensuring that our support quickly integrates into existing activities. These tools may be custom-designed for specific client needs and for long-term client manageability and benefit.

Consulting
Senior Management and Policy Support
Strategic Planning Support
Project Management

Engineering and Technical Services

Superior performance and meeting the highest expectations are EXCEL standards. We focus on managing commitments and ensuring quality in facility engineering and design throughout facility lifecycle.

Changes in facility hardware or analysis, degraded conditions, and issues related to the content of the Safety Analysis Report or Authorization Bases can significantly increase facility regulatory risk. But complete and accurate Safety Analysis Reports can enhance safety, and benefit both regulators and operators. EXCEL's expertise in

developing complex, large-scale, licensing submittals is directly applicable to complex and detail oriented projects.

Engineering and Design
Commitment Management
Quality Assurance
Probabilistic Safety Analysis
Plant Modification Design and Implementation
Configuration Management
Power Uprate

Training and Operations Services

Knowledge at all levels of the facility organization is essential to ensure that requirements are met and operations are carried out efficiently and effectively. To ensure that the full benefits of facility improvements are realized and effectively implemented, personnel training is crucial. EXCEL's training services have proven to increase understanding of innovative and complex changes.

The EXCEL team has developed tools that methodically examine the technical accuracy of the entire surveillance and periodic testing programs. Basis files are constructed for each test, providing a configuration baseline for future changes. The application of the tools identifies and facilitates the elimination of unnecessary testing.

EXCEL instrument calibration interval adjustments have achieved significant cost savings at nuclear facilities. Application of EXCEL experience with procedure evaluations, failure analysis, drift evaluations, preventive maintenance programs, and other facility requirements ensures an integrated solution for optimizing test and calibration intervals.

Training Services
Plant Operations and Maintenance Support
Surveillance Programs
Calibration Interval Extensions
(24-Month Extensions, IAW GL 91-04)

The Nuclear Performance Solution

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Just Another Ordinary Day

We help keep it that way.

Credibility. Integrity. Experience. Expertise. Reliability. Commitment. We apply these qualities everyday in everything we do. We're EXCEL and we ARE the Nuclear Performance Solution. For twenty years, we have provided the highest quality technical and engineering professional services to almost every nuclear facility in the United States and many facilities and organizations internationally.

We're at the vanguard of the industry in supporting major initiatives to improve existing nuclear facilities' safety and performance while reducing costs.

EXCEL's strong nuclear corporate citizenship is evidenced by our support of the American Nuclear Society, the European Nuclear Society, the Eagle Alliance, and the Young Generation for all applications of nuclear science and technology.

Nuclear organizations, both commercial and federal, look to EXCEL to help solve the tough industry challenges. And EXCEL is at the top of a very short list of companies capable of handling them. We continue to be the lead in developing solutions to many complex technical and regulatory issues.

EXCEL is intensely dedicated to the nuclear facilities of both today and tomorrow. As a source of significant experience and expertise, EXCEL maintains a unique position in the nuclear industry. EXCEL, the Nuclear Performance Solution. We've helped improve the industry's safety and performance in the past. And our experience and expertise will ensure the continued success of our clients and the nuclear industry into the next century.

The Nuclear Performance Solution

EXCEL
SERVICES CORPORATION

11921 Rockville Pike, Suite 100 • Rockville, MD 20852 USA
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PROTO-POWER: YOUR FULL SERVICE PARTNER

Since its founding in 1974, Proto-Power Corporation has provided engineering, design, and project management services to the power industry.

We offer exceptional breadth of resources with experienced mechanical, electrical, instrumentation and controls, and civil/structural engineering professionals and designers skilled in power plant systems and engineering analysis. Specialized expertise includes security system upgrades, equipment obsolescence solutions, containment sump strainers, and buried pipe refurbishment technologies.

Proto-Power focuses on:

- Plant performance problems investigations
- Code and regulatory requirements assessments
- Feasibility studies and conceptual design development
- Plant upgrade cost and effectiveness evaluations

- Plans and specifications for plant construction or modification.

Multi-disciplined capabilities and an uncompromising adherence to industry quality standards assure accurate analysis, comprehensive solutions and cost-effective implementation on projects of every size.

Our broad spectrum of nuclear power plant engineering services, system modeling and proprietary performance analysis software for nuclear plants are based upon a first-hand, in-depth knowledge of the industry, and of regulatory issues.

To meet the specific needs of the electric power industry for analyzing the performance of power plant systems and equipment, Proto-Power has developed its PROTO-FLO™, PROTO-HX™, and PROTO-HVAC™ thermal hydraulic system modeling software and PROTO-SPRINKLER™.

These powerful, PC-based programs provide extensive capabilities for modeling complex power plant piping, heat exchangers, HVAC systems, and fire protection systems in an easy-to-use, Microsoft® Windows®-based, graphical environment.

- PROTO-FLO™ calculates steady-state incompressible flows, pressures, and temperatures in piping systems with the capability to model pumps, valves, heat exchangers and other components typically found in power plant systems. A transient analysis module is also available to evaluate system transients with an existing PROTO-FLO™ database.

- PROTO-HX™ calculates temperatures and heat transfer rates through several types of heat exchangers, and can analyze and trend observed test data to predict heat exchanger performance under extrapolated conditions. Modules are available for shell and tube heat exchangers, air cooling coils, single cycle refrigeration chillers, condensing heat exchangers, and plate and frame heat exchangers.

- PROTO-HVAC™ calculates steady-state incompressible flows, pressures, and temperatures through control dampers, fans, and complex duct systems for system balance and performance.

- PROTO-SPRINKLER™ is a simple, powerful, and versatile design software tool that allows it to be used to model and evaluate fire sprinkler systems of any complexity. PROTO-SPRINKLER follows the standard methodology and approach for calculations as specified in NFPA 13, Standard for the Installation of Sprinkler Systems, and NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection.

Proto-Power's Nuclear Quality Assurance Program complies with the Code of Federal Regulations (10CFR50, Appendix B) and ANSI. Our software is developed, validated and controlled under this program.

We welcome your inquiry. Please contact us at our headquarters in Groton, CT, or at our Midwest Regional Office in Naperville, IL, as shown in our ad.



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Its all about commitment. To standards, quality and responsiveness. We understand the issues and pressures power companies face. That's why we've developed a full spectrum of power plant engineering services and performance analysis software to meet your challenges. Whether it's facility upgrades, engineering analysis to improve efficiency, addressing regulatory issues, or unique approaches to problem solving, choose a partner with a commitment as strong as yours.

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..... ENGINEERING SERVICES TO THE POWER INDUSTRY

NEEDS MET

by Kinnon Phillips
Contributor

The unique nature of nuclear power plants demands vendors with the skills and experience that can be relied upon to consistently perform. Barnhart Nuclear Services has developed expertise that encompasses service areas that have been utilized by leading nuclear energy producers, contractors and suppliers.

Heavy rigging in nuclear power facilities presents the opportunity for custom designed rigging and handling tools. Barnhart's ISO9001 certified engineering and fabrication capabilities provide solutions from concept through completion to handle major components safely and on schedule.

Life extension, upgrades and major maintenance require the handling of critical components within plants. To perform this work during planned outages, a thorough knowledge of both major construction techniques, structural analysis and ALARA as well as the demanding requirements of nuclear protocol are required. Barnhart has developed unique tools and methods to perform the movement of major equipment such as:

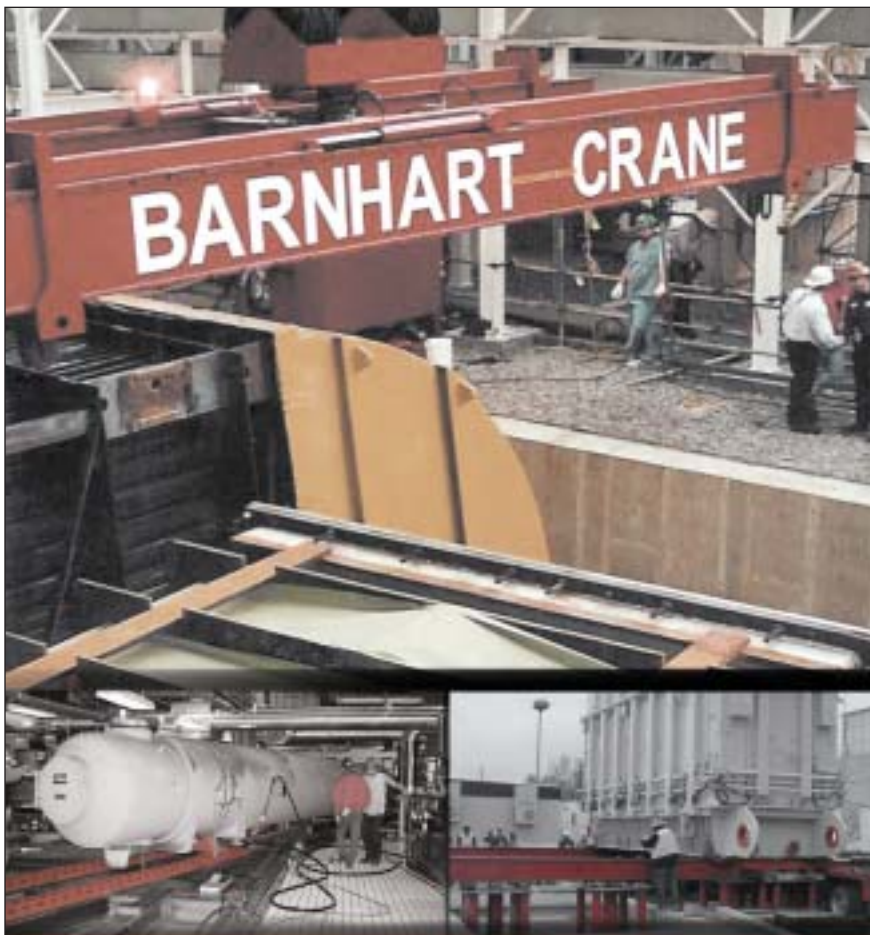
- RPV Closure Heads
- Moisture Separator Reheaters
- Pressurizers
- Feedwater Heaters
- Condensers
- Transformers

Rigging supervision, lift planning, heavy rigging and crane services are provided through their team of professional supervisors, engineers and project managers. Barnhart insures the safety, quality and timely completion of plant outages. Often they are called upon to participate in the "Readiness Planning" of various operating plants. These plans serve to limit downtime during emergency outages by having in place engineering, rigging plans, transportation surveys and custom tools associated with critical components such as transformers, reactor coolant pumps and turbine rotors.

Experienced and certified for Hazmat service, Barnhart brings a working knowledge to the transportation of contaminated components to burial or processing. Barnhart's Heavy Lift Terminal in Memphis serves as a transfer point for items bound for the decontamination and waste processing facilities of RACE and Duratek. Barnhart provides transportation of such components by barge, rail or road.

Barnhart rounds out their experience by providing warehousing services to support the Pooled Inventory Management System (PIMS) Program administered by Southern Company. The PIMS program is a mechanism for nuclear plant owners to jointly procure and store critical plant spare equipment. Permanent PIMS management reside at the Barnhart facility coordinating the maintenance and handling of the inventory by Barnhart personnel.

To examine case studies demonstrating the work experience of Barnhart in the nuclear power industry, visit us at barnhartcrane.com.



For the nuclear industry, critical mass isn't the only thing crucial to sustained success.

What does it take to keep the nuclear industry energized? When it comes to major component replacements as part of life extensions and uprating, it takes the innovative rigging techniques and proven safety of Barnhart. A company with vast experience in replacing MSR units, feedwater heaters, pressurizers, BWR dryers and more.

As a "partner in planning" in the early evaluation of these projects, Barnhart can bring innovation to the job to reduce the critical path, minimize plant impact and improve ALARA. Working as more than just a supplier, we can bring our ideas to your team and produce tangible results.

Consider the value of success...time saved, safety improved, costs reduced. There is only one logical reaction. Call us today to see how our world-class solutions can make the difference in your next project.

1.800.587.3249
sales@barnhartcrane.com
barnhartcrane.com

BARNHART
Minds Over Matter

Everest VIT: Taking Tank and Vessel Inspection to New Heights

For remote viewing in large areas, Everest VIT offers a full range of rugged, industrial pan-tilt-zoom cameras. Each system features a color zoom camera module, high-intensity lighting, pan-and-tilt mechanism, and industrial waterproof packaging for protection from extreme environments.

The CA-ZOOM PTZ 6.0 has two camera head options that offer wide-angle and tele-zoom views, and it can be equipped with an optional parallel laser measurement accessory. The smaller PTZ100 camera head is offered in anodized aluminum, weighing only 1.8 kg (3.9 lbs.) and can fit into 100 mm (4.0") dia nozzles or flanges. The larger

PTZ 140 requires 150 mm (6") dia access ports and has more lighting and zoom capability for larger tanks and vessels.

The CA-ZOOM PTZ 6.0 inspection system remains the only device in its class to offer an integrated image capture and data management tool. The exclusive iVIEW™ technology platform allows for still and video image management, comparison measurement, audio and text annotation. This integrated hardware and software platform allows users to easily view, capture, organize and save a variety of images for in-the-field or off-site assessment. It features a handheld controller equipped with a large full VGA-resolution LCD monitor (16.0cm / 6.4 in) as well as dual joy sticks to control camera pan and tilt and menu navigation. Buttons control zoom, focus, lighting, image brightness and menu control for image management. In addition, the system is housed in a portable shipping and storage case; the system is ready for operation within 30 seconds of initial set-up.

Headquartered in Flanders, New Jersey and with offices around the world, Everest VIT is the industry leader in the development, sales and rental of Remote Visual Inspection equipment. Everest VIT provides 24x7 on-site inspection and retrieval services, as well as a wide array of RVI/VT and product training. Everest VIT's services and products enable companies to inspect plant components, confined spaces, radiologically-controlled areas, machinery, facilities and infrastructure in the safest, quickest and most cost-effective manner possible. Everest VIT products have been used to streamline the inspection process in all industries where image quality, safety, security and accuracy are of paramount concern, such as aviation, electric power generation and processing. For more information about Everest VIT, visit www.everestvit.com or call 1-888-332-EVIT (3848) or 973-448-0077.



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The NEW Ca-Zoom® Pan-Tilt-Zoom (PTZ) 6.0 is the only industrial remote visual inspection system that offers a fully integrated suite of capabilities that lets you capture still images and motion video, file, compare, annotate, measure, and review – **all at the touch of a button.**



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New mini PTZ 100
98 mm (3.88 in.) dia
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DIVESCO PUTS A WORLD OF SURPLUS AT THE UTILITIES' FINGERTIPS.

Founded in 1979, Divesco was the first company of its kind to offer large stocks of nuclear parts and components within the highly regulated nuclear industry. Under its NUPIC audited and approved QA program, Divesco offers the industry I&C, electrical and mechanical parts and components, many of which are obsolete or extremely hard-to-find.

Decades of dedicated service to the industry has helped the company establish a trusted network of partnerships.

Working together with **Nuclear Logistics, Inc.**

Divesco can offer their clients access to safety-related parts, and custom-engineered solutions, as well.



Priority One Expediting™ — the fastest service in the industry.

But the real power of Divesco's experience is evident in their Priority One Expediting™ service -- the fastest in the surplus industry.

History has taught them that the single most important factor for the utilities is speed, ensuring orders are delivered within the tight timeframes dictated by increasingly critical timelines. Tom Westbrook, one of Divesco's co-founders, sums it up this way: "People lose their sense of humor when an outage is costing them \$60,000 an hour. Time is of the essence."

Divesco's 24/7/365 availability and an "always on" web site puts a world of qualified nuclear surplus at the utilities' fingertips.

Divesco's 24/7/365 availability and an "always on" web site puts a world of qualified nuclear surplus at the utilities' fingertips.

THE RIGHT PARTS. THE RIGHT EXPERIENCE. RIGHT NOW.

KNOWLEDGE MEANS POWER.

Obsolete and hard-to-find I&C, electrical, mechanical, safety-related parts and components.

10CFR50 Appendix B quality assurance program.

Additional documentation and assurances you have to have.

And, Priority One Expediting™ service -- the fastest in the surplus industry.

It's Good to know Divesco.



DIVESCO
Delivering NuCLEAR Solutions

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Thermo – A Powerhouse Supplier to the Nuclear Industry

Leading the world in high-tech instrumentation, Thermo Electron Corporation can help you with your instrumentation, application, and service needs. We have the solution and are the experts in the following areas:

- Neutron Flux Monitoring
- Data Acquisition and Monitoring
- Level and Density Measurement
- Custom Radiation Shielding
- Industrial Hygiene
- Radiation Measurement & Protection
- Water Analysis
- Laboratory Informatics
- Radiation Tolerant Imaging (Inspection and Monitoring)
- Service and Training

Thermo's offerings and commitment to the energy market will provide power customers with easier access to application-specific solutions to further improve the safety, compliance and profitability of power generation, transmission and distribution processes. Thermo products and services help power producers satisfy regulatory and safety requirements. They help customers achieve maximum efficiency and profitability to meet demand while generating low cost, clean and reliable power. Thermo's integrated solutions assist users to exceed their customers' demands while delivering peace of mind.

Thermo's capabilities in the nuclear power industry are extensive as noted on the process

map (see Fig. 1). Thermo is committed to the nuclear industry with our long term support of our products. We provide service and offer replacement parts for obsolete products. Additionally, we continuously research and develop new state-of-the-art products with same form, fit, and function to help plants effortlessly upgrade to meet today's standards.

Visit www.thermo.com/power or email us at sales.power@thermo.com or call us direct at 1-800-437-7979 to learn more about Thermo Electron Corporation and how its comprehensive services and integrated products can benefit you and your plant.

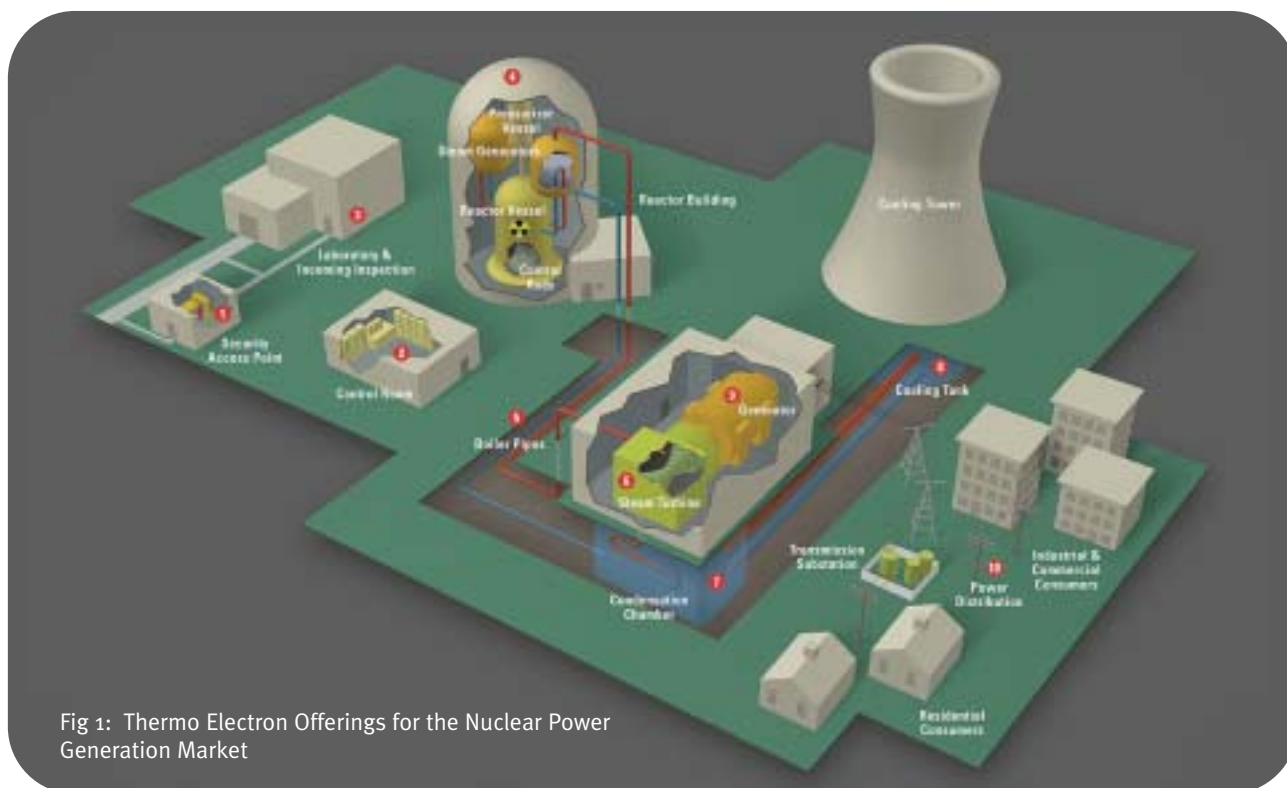


Fig 1: Thermo Electron Offerings for the Nuclear Power Generation Market

LEGEND KEY

- 1 SECURITY ACCESS POINT**
 - Radiation measurement and protection monitoring
- 2 CONTROL ROOM**
 - Radiation measurement and protection monitoring
 - Data acquisition, monitoring and management
 - Alarm monitoring
 - Neutron flux monitoring
 - Reactor protection systems
 - Audible count rate drawers
 - Boron dilution monitors
 - Class 1E qualified safety-related cabinets
 - Class 1E qualified power supplies
 - LCD digital meters
- 3 LABORATORY AND INCOMING INSPECTION**
 - Radiation measurement and protection monitoring
 - Data acquisition, monitoring and management
 - Laboratory Informatics
 - Radiation Hardened Cameras (Color or Black & White)
 - Weld and Alloy Verification
- 4 REACTOR BUILDING**
 - Radiation measurement and protection monitoring
 - Data acquisition, monitoring and management
 - Level measurement
 - Ex-core neutron flux detectors
 - Class 1E safety-related post-accident qualified cable assemblies
 - Audible count rate during shutdown maintenance periods
 - Installed gamma area monitors
 - Boric acid storage monitoring
 - Water analysis monitoring
- 5 BOILER PIPES**
 - Cooling water and condensate flow measurement
- 6 STEAM TURBINE**
 - Radiation measurement and protection monitoring
 - Data acquisition, monitoring and management
- 7 CONDENSATION CHAMBER**
 - Data acquisition, monitoring and management
 - Level measurement
- 8 COOLING TANK, COOLING TOWER AND RESERVOIR**
 - Data acquisition, monitoring and management
 - Influent and discharge flow measurement
 - Density and level measurement
 - On-line water analysis
- 9 POWER GENERATOR**
 - Data acquisition, monitoring and management
- 10 POWER DISTRIBUTION**
 - Data acquisition, monitoring and management



Still collecting data manually?

Increase profits by automating data distribution and management with Thermo's paperless data acquisition systems.

How much time do you spend collecting data? Organizing it? Analyzing it? Distributing it to key engineers, technicians, and managers across your organization? Probably way too much—especially if you're still doing it all manually.

Thermo's SmartView family of paperless data acquisition systems dramatically reduce the time it takes to collect, distribute, and manage process data. Our flexible, scalable, easy-to-maintain platforms automatically deliver the detailed information you need to make informed decisions, analyze process parameters, and meet regulatory requirements.

To learn more, visit www.thermo.com/power or call 800-437-7979.



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our intuitive, scalable,
automated data
acquisition platforms.

Analyze • Detect • Measure • Control™

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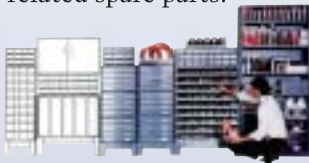


A Powerhouse of a Supplier

The very core of our business is providing products and solutions to meet the many challenges our customers face everyday by constantly broadening the scope of the company with leading edge products, state-of-the-art technology and innovative supply service. Just what you'd expect from a powerhouse of a supplier.



Nova manufactures and supplies standard and specialty fasteners in any size or alloy including many OEM fasteners and related spare parts.



We also supply a diverse line of quality commercial grade fasteners and MRO products through a variety of methods all designed to drive down your costs.



From your customized drawings and specifications we can manufacture specialty parts and components to your exacting standards

including precision-machined parts, specialty steel forgings, plates, bars, shapes, fittings and flanges.



Nova has extensive welding and fabrication capabilities and can provide both small and large fabrications and welding services. These can be supplied under Nova's ASME NCA-4000 NPT certification.



PlasmaBond™ from Nova is a metal film molecularly bonded to the substrate of specialty parts and fasteners to provide a permanent dry lubricated surface that prevents galling and eliminates the need for

conventional thread lubricants and their associated costs. PlasmaBond is not affected by heat, load or longevity of the interval between maintenance service periods.



Manufactured and distributed by Nova, the TechnoFast HydraNut® is revolutionizing the technology for tightening and maximizing the effectiveness of critical bolted joints including Reactor Coolant Pump and Vessel Closure applications.



Unistrut®. As the exclusive distributor in North America, Nova provides nuclear safety

related Unistrut® Metal Framing Products shipped from our extensive inventory. The world's best strut now has the world's best service.



Nova Services & Applications has Supply Chain Management down to a science. Our inventory management software helps you locate replacement parts and increases our ability to share inventory information with our clients through our virtual inventory database at www.utilitystockexchange.com.



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Another Powerhouse Performance!

Year after year Nova continues to give outstanding performances in product innovation, product quality, technical support, service, delivery and overall value for the Utilities Service Alliance. For the third time, Nova is awarded the USA Vendor Partner of the Year. Nova has been a vendor partner since the Utilities Service Alliance was founded and continues to dedicate themselves to being a "Powerhouse of a Supplier." The award is richly deserved and it's a genuine pleasure for USA to recognize Nova again for its continuing commitment to the Utilities Service Alliance.



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Columbia Station
Comanche Peak Station
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Cooper Station
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- * Safety & Training
- * Staff Augmentation
- * Demo Equipment Management / Leasing
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- * Scrap Processing & Recycling Options

Decommissioning Safety Milestone Achieved

DEMCO proudly congratulates our Employees for achieving the safety milestone of working over ONE MILLION MAN-HOURS on nuclear related D&D projects without incurring a Lost Time Accident.

This milestone safety accomplishment is a testimonial to the safety Culture, Behavior and Values which establish the backbone of DEMCO's approach towards performing nuclear D&D work.

DEMCO started performing radiological decommissioning projects in 1997. Since then DEMCO has performed work at various DOE, NRC, and FUSRAP facilities representing a diverse history of the nuclear industry:

- * Rocky Flats Closure Project
- * Fluor/Daniels Fernald
- * Westinghouse Savannah River Site
- * Oak Ridge National Laboratories
- * Los Alamos National Labs
- * Numerous FUSRAP Projects
- * Various University Related Projects
- * Yankee Nuclear Power Facilities
- * Nevada Test Site

DEMCO performs the work where "the rubber meets the road". DEMCO Employees, help design the projects, establish Means & Methods, operate the equipment, perform the decontamination, dismantle and demolish the structures in a safe and compliant manner so the end result is safe packaging, transportation and disposal. In short the Employees of DEMCO are performing some of the most dangerous physical work on any D&D project.

The DEMCO Team partners with facility personnel to design and implement unique, versatile and flexible Means & Methods in demolition procedures. DEMCO helps pioneer changes in how D&D work is approached by nuclear professionals.

Congratulations to all DEMCO employees for achievement of this important safety milestone!

DEMCO Inc.



October 2003

DEMCO Inc.

238 Lein Road
West Seneca, NY 14224

Phone: 716-674-0883

Fax: 716-674-0884

Website: www.demcoinc.com

Email: demco@demcoinc.com



November 2004

Demolition & Nuclear Decommissioning



www.AmericanDND.com * Phone: 716-699-5515 * Fax: 716-773-5515

The Quality Nuclear Power Support You Can Count On

Our Quality Commitment

Quality is the centerpiece of the value and service we provide to our clients. It is infused in our people, our programs, our processes, and our practices. We believe that it is the quality of our deliverables that ultimately delivers our projects in budget and on schedule.

Our Leading Expertise Commitment

Key to our ability to produce quality deliverables is the leading engineering, design, analysis, and project management know-how that we maintain current through our highly experienced staff and extensive state-of-the-art applications. And, of course, we are the company that always manages to get it done.

Our Power Focus Commitment

We've been thinking power... exclusively for 114 years. We think that's a rather firm commitment to maintaining our focus on what we do best.

Our Nuclear Commitment

Nuclear power clients have been a primary part of our power focus since 1954, pretty much when it all started. Nuclear clients have good reason to have confidence in our capabilities, not only from our quality, expertise, and focus, but also from knowing we will be here for them when needed with what they need, as we have been for 50 years. Owners enlist our broad support as their preferred engineer and rely on our expertise for specialized problem-solving. Our current activities encompass emerging issues and leading edge initiatives such as:

- Power uprates
- Digital controls
- Adjustable speed drive replacements
- Security upgrades
- Containment sump strainer analysis and modifications
- Dry fuel storage

That's in addition to our extensive on-going engineering, design, and analysis for nuclear station owners for diverse projects including:

- Modifications
- Performance improvement
- Outage and restart support
- Due diligence for plant transactions

To discuss your specific needs, contact Bob Schuetz at 312-269-6630

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www.sargentlundy.com



The Constant Evolution of Radiation Spectroscopy Technology

ORTEC has long been at the technology forefront in the design and manufacture of precision gamma-ray and alpha particle detectors, signal processing electronics, software, and systems for the nuclear industry.

There are literally hundreds of ORTEC products including components, instruments and special systems for nuclear power plant and government nuclear facility operations, special nuclear material safeguards, search and identification of radioactive materials, and chemical weapons detection.

Trans-SPEC is a good example of ORTEC technology at the "cutting edge." For the first time, an HPGe gamma-ray spectrometer with everything you need in a single easy-to-handle package. No need for liquid nitrogen. No long cables, one package, ready to go. The dangerous and inconvenient LN₂ dewar normally associated with HPGe detectors has been

replaced with a miniature Stirling-cycle cooler of extremely high reliability. Coupled with an implementation of ORTEC's well established digital signal processing platform and employing special signal processing algorithms, the trans-SPEC packs huge technology advances into a small package.

The ORTEC commitment to bring improved measurement systems to the nuclear industry has resulted in the development of many new technologies and innovations. These include the revolutionary Profile Series HPGe detectors with DEFINED CRYSTAL DIMENSIONS, and the recent FX-series, combining large area, excellent resolution and low energy efficiency, until now a kind of "holy grail" for many gamma spectroscopists. Large coaxial Ge detectors of greater than 200% relative efficiency are now available from ORTEC as the crystal size limits are pushed ever upward. Even detectors of this size may be cooled in counting room applications by the new and improved X-COOLER II, (by now, X-COOLER and X-COOLER II are by far the most widely deployed electric cooler of Ge detectors ever).



In Situ HPGe
Gamma Spectroscopy
without LN₂. . . at last!



ORTEC is now exploiting in practice the potential of the digital signal processing platforms, pioneered by the company in 1989 with the introduction of the DSPEC. The latest DSPEC Pro uses a fast DSP to "correct" on a pulse by pulse basis various artifacts which would normally degrade the spectrum, such as detector ballistic deficit, charge trapping, microphonics, pileup losses and the distortion introduced into a spectrum by rapidly changing count rates. The effect of periodic noise such as a mechanical coolers can be reduced by a patented low frequency rejecting digital filter, also in the DSPEC Pro.



DSPEC Pro

ORTEC has been developing software for nuclear spectroscopy applications since the mid 1970's. For Counting Laboratories, we endeavor to provide innovative PC-based software solutions to simplify operations, while maximizing performance and accuracy. For environmental counting laboratories, GammaVision-32 and AlphaVision-32 are comprehensive gamma and alpha analysis packages with a long pedigree of continuous development. ScintiVision-32 provides for NaI detector applications.

ORTEC Renaissance is a complete whole-body counting and lung burden analysis package. ORTEC Global Value software is designed to automate gamma spectroscopy analysis and reporting for Nuclear Power counting laboratories.

ORTEC is here to serve your needs through our technology. Come to us with your measurement problems and we will give you our close attention.

More information on ORTEC Technologies is available from our website www.ortec-online.com or e-mail info@ortec-online.com

Technical papers on many of our technology innovations may be downloaded from <http://www.ortec-online.com/papers/reprints.htm>

e-mail info@ortec-online.com • 800-251-9750

801 South Illinois Ave., Oak Ridge, TN 37831-0895 U.S.A. • (865) 482-4411 • Fax (865) 483-0396

For International Office Locations, Visit Our Website

ORTEC®

www.ortec-online.com



The Park Company, Inc. - A Stress Free Solution to Obsolescence

The Park Company, Incorporated has been supplying new surplus commercial and nuclear safety related components to the power industry since 1990. Park entered into power plant sales with the purchase of all equipment from Energy Northwest (WPPSS) canceled plants WNP-4, a Babcock & Wilcox 1210 MW PWR, WNP-5, a Combustion Engineering Systems 80 1260 MW PWR and large blocks of inventory from TVA canceled plants at Hartsville & Phipps Bend Tennessee.

The Park Company, Inc. — Is More Than Just Valves



**We also supply
Safety Related &
Commercial Grade:**

Pumps
Motors
Motor Control Centers
Steam Turbines
Heat Exchangers
Transformers
Instrumentation
Actuators
Blowers
Compressors
Tanks



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E-Mail: misc@theparkcompany.com
Web Site: www.theparkcompany.com

Contact: Michael Christianson Jr. @
The Park Company, Inc.
2805 East Ainsworth Street
Pasco, WA 99301
(509) 547-9929 Phone
(509) 547-9356 Fax
E-Mail: mpec@theparkcompany.com
Web Site: www.theparkcompany.com

History

Through the years we have continued to purchase warehouse spares and equipment from other canceled projects and power companies such as Trojan, Maine Yankee, Marble Hill, Duke Energy, Georgia Power & Dominion culminating with our recent purchase of a third Energy Northwest plant, WNP-3, a CE Systems 80 Plant (the sister unit to WNP-5) that was 75% complete when construction was halted.

Services & Locations

Our inventory is unused and is available for immediate delivery 24/7 with complete documentation available for safety related and most commercial grade equipment. We encourage visits to our Pasco, Washington site where thousands of new, on the shelf components are stored at our 100,000 square foot facility and our Elma, Washington (WNP-3) site where we are currently cataloging an immense inventory of unused, installed equipment from that 1.5 million square foot plant.

Solutions for Critical Problems

If you are involved in or planning power upgrades, re-licensing efforts, needing equipment for upcoming outages or parts for an unplanned shutdown, make sure you call The Park Company, Inc.!

Massive Liquidation Sale



Combustion Engineering System 80 Pressurized Water Reactor Plant Purchased! The Park Company, Inc. is pleased to announce the purchase of former Energy Northwest (WPPSS) canceled nuclear project WNP-3 at Satsop, Washington. Park will be offering all ASME Section III and Balance of Plant equipment at highly competitive Prices. Equipment available from this 75% complete plant includes: Westinghouse 1243 Net MW Turbine Generator (willing to sell parts), Westinghouse switchgear, hundreds of ASME and commercial pumps, motors, valves, fans, actuators, thousands of miles of stainless and carbon steel pipe, thousands of miles of code cable, a complete Foxboro Spec 200 control room, feedwater heaters and much, much more. Visits to the plant site are encouraged if you are involved in or planning MW upgrades, re-licensing efforts, need equipment for upcoming outages or are a vendor looking for equipment to serve customer requirements. Complete documentation for all equipment is available on site.

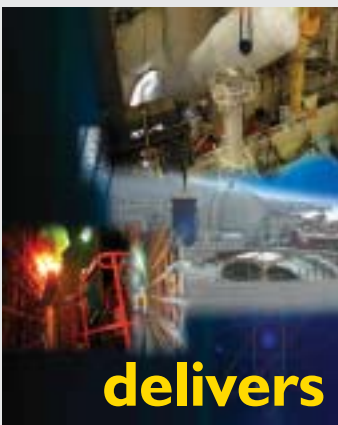
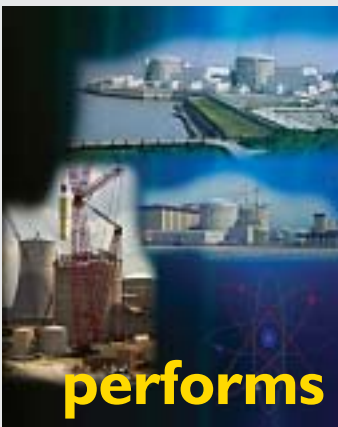


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Bechtel Nuclear Power

Meeting Nuclear Needs Today and Tomorrow

Bechtel has been an active leader in the nuclear power industry for more than 50 years. With over 56,000 MW of nuclear design and construction and operating plant support experience on over 150 plants worldwide, Bechtel:

- Performed engineering services and/or construction services for over 50% of the U.S. nuclear power plants
- Ranked #1 overall contractor in the U.S. by ENR
- Ranked #1 in power by ENR
- Ranked among the world's best in safety
- Ranked world's best construction/engineering company by Global Finance

Nuclear Projects

Bechtel is the industry leader for successful large-scale nuclear projects. Their full-service capabilities include:

- Project management
- Engineering and design
- Procurement
- Construction
- Construction management
- Start-up
- Cost and schedule

New Generation

Bechtel's new nuclear generation activities include:

- Tennessee Valley Authority (TVA)
 - Engineering/design/procurement or the restart of Browns Ferry I
 - Cost feasibility study for deployment of the ABWR at the Bellefonte site
- Dominion (North Anna)
 - Siting studies
 - Early Site Permit (ESP)
 - Combined Construction and Operating License (COL)
 - Site engineering
- Performing site selection, ESP, and COL application activities for several major U.S. utilities
- Supporting design certification efforts of reactor technology suppliers

New Generation (*continued*)

- Interfacing with DOE on various new generation activities and studies on construction costs, schedule, and supply chain
- Participating in NEI new plant activities – ESP, COL, Part 52, infrastructure, and security

Steam Generator and Reactor Pressure Vessel Head Replacement

Bechtel's industry achievements include:

- Shortest overall SGR breaker-to-breaker schedule ever achieved (65 days)
- Lowest U.S. SGR accumulated radiation exposure (57 man-rem)
- First U.S. one-piece SGR
- First U.S. SGR and RPVHR using a through-the-wall replacement
- First to use optical templating in the U.S.
- 30 SGR projects completed or ongoing worldwide
- First RPVH replacement in the U.S.
- 7 RPVH replacements completed

Nuclear Operating Plant Services

Bechtel offers a comprehensive array of operating plant services, including:

- Engineering and design
- Maintenance and modifications
- Planning, scheduling, and cost control
- Plant recovery support
- License renewals
- Power uprates
- Alternate source term
- I&C digital control uprates
- Plant security system upgrades





When you think nuclear, you think IST—well-known in the nuclear world since it's origins from Westinghouse in 1988. Today, IST is the leader worldwide, with imaging and sensing systems present in three quarters of all nuclear plants.

IST has made numerous acquisitions in its seventeen-year history to expand its market position both geographically and by acquiring new technologies. Now, with presence in the United States, Canada, England, France, Germany and China, and superior technological capabilities, IST provides complete solutions to detection and imaging for nuclear power plants worldwide.

Sensing Systems

IST is the world's largest supplier of radiation sensors, providing the nuclear power industry with in-core and out-of-core detectors and electrical penetrations. In addition, IST manufactures

the associated electronics, temperature sensors, thermocouples, special purpose valves, connectors, mineral-insulated cable/connector assemblies, electrical conductor seal assemblies and portable real-time neutron and gamma survey meters.

IST is recognized as a global leader in this technology.

Imaging Systems

With thousands of systems in operation, IST is the leading supplier of CCTV inspection and surveillance systems for commissioning, decommissioning, reprocessing and power generation. The product line also includes a full line of accessories for lighting and viewing.

The newest CCTV inspection system is the ALLRAD, a highly adaptable inspection tool for real-time, high resolution video. Depending on the user's application, a radiation tolerant or color CCD camera module can be mounted onto the system's compact pan and

tilt assembly. The selected camera is easily positioned on a simple mount and connected without the use of tools. Both camera modules provide zoom capability and operate over a simple common cable connected to the controller. Use of the ALLRAD minimizes equipment needed during a shut down and lowers the up-front investment in multiple camera systems for that critical downtime. It can be used in air or water. Also, with enhanced noise immunity, it can be deployed in the pool where electrical noise from other equipment is suppressed.

Other IST cameras include the Mini PTZ and the low cost, rugged Dotcam inspection cameras. Both provide outstanding viewing performance in a compact and economical package.

Your "Solution Center"

With state-of-the-art technology and historical, continued success in the nuclear industry, feel confident in looking to IST for solutions for your specific needs.



CCTV Inspection and Surveillance Cameras & Systems | In-Core Detectors | Out-of-Core Detectors | Electrical Penetrations

IST... Proven quality solutions to meet your requirements.



Nuclear Valves

Anderson Greenwood/Crosby Center of Excellence

The Nuclear Center of Excellence for Tyco Valves & Controls in North America continues its commitment to the nuclear industry by expanding on the safety valve products and services it is recognized for. The Nuclear Center now services other familiar brands that fall under the TVC-NA umbrella. For more information on the products and services we offer, visit our website at:

www.crosbynuclear.com

or call

888-CROS-NUC

(888-276-7682)



**Yarway Welbond
Lonergan Relief Valves
Keystone Butterfly Valves**



World Leader In Pressure Relief Valve Technology

Since becoming the first valve company in the nation to receive the NV stamp in 1971, Anderson Greenwood Crosby's commitment to the nuclear electricity generation industry has been unwavering.

Anderson Greenwood Crosby pioneered the development and application of pressure relief valves and associated instrumentation to the worldwide nuclear industry. This leadership position continues by providing products and solutions that help safeguard the industry, while enhancing plant performance – impacting your "Bottom-Line." A staff of experienced engineers is dedicated to developing products and solutions to meet the industry's emerging valve related requirements on power uprates, the implementation of digital controls and the construction of new advanced reactors. Additionally, trained and qualified service personnel are available on a global basis to perform in-situ testing, shop/field repair, and product and maintenance training.

Anderson Greenwood and Crosby are brands of Tyco Valves & Controls (TVC), which is the world's leading manufacturer and supplier of valves, actuators, controls and instrumentation. With the strength and expertise of over 60 individual brands including AVID, Descote, Keystone, Hancock, Lonergan, Morin and Yarway, TVC can offer innovative solutions that are second-to-none in meeting the most technically-challenging flow control applications.

For more information on the products and services we offer, visit our website at:

www.crosbynuclear.com

or call

1-888-CROS-NUC (1-888-276-7682).

Celebrating a decade of innovation.

Key Dates

> 1994

First year of operations.

> 1996

First EPA Superfund assignment, to move coal tar-contaminated soil from a site in Pennsylvania.

> 1997

First work on a DOE site, in Ashtabula, Ohio.

We open our first transload facility, in Cisco, Utah, for packaged materials.

> 1999

First nuclear power plant decommissioning project, at the Maine Yankee plant.

Our first FUSRAP assignment, near the St. Louis Airport.

Our first of three appearances on *Inc.* magazine's roster of fastest-growing companies.

> 2000

Our equipment fleet now includes more than 1,000 railcars and 1,500 intermodal containers.

> 2001

We purchase Transport Plastics Packaging, in Sweetwater, Tennessee.

Founder and CEO John Evanko named "Master Entrepreneur of the Year" by Ernst & Young.

> 2003

We complete the industry's first intermodal (rail/truck) shipment to the Nevada Test Site.

We are the first to move a reactor head (from the Davis-Besse nuclear facility in Ohio) via rail.

> 2004

We introduce our lead-lined, intermodal Shielded Multi-Use Type-A Container.

We move large steam generators by rail, from the Rancho Seco nuclear power plant in California.

> 2005

First unit train shipment from Rocky Flats to Envirocare of Utah, LLC.

Our fleet now totals more than 1,700 railcars and 3,000 intermodal containers.

Celebrating our first "decade of innovation."

MHF Logistical Solutions this year is celebrating its first ten years of operations – a "decade of innovation."

Innovations that have made rail a viable option for transporting a range of low-level radioactive wastes and other hazardous materials, with strategies that include packaging, technical services and intermodal transloading between rail, truck and marine conveyances.

A growing portfolio of specialized equipment – railcars, containers, packaging and more – designed specifically for shippers of radioactive waste and other hazardous waste and materials.

And the innovation of bringing together experts with detailed knowledge – about the needs of our clients, as well as of government regulations, waste management requirements and transportation methods – in one company.

We're there.

Supporting nuclear power plant decommissioning projects across the U.S. With cost-effective packaging, innovative transportation solutions and technical expertise to handle large components, contaminated soil and more. On time. And on budget. Contact us toll free at 877.452.9300 or visit www.mhfls.com



MHF LOGISTICAL SOLUTIONS

ENGINEERED SOLUTIONS FOR A COMPLEX WORLD

REEF INDUSTRIES, THE MANUFACTURING LEADER OF INDUSTRIALIZED PLASTIC FILMS

REEF INDUSTRIES, INC. has been a manufacturer of reinforced laminates since 1957. Reef utilizes a patented manufacturing process that yields the highest strength to weight ratio available and offers exceptional tear and puncture resistance.

Griffolyn®, a Division of Reef Industries, offers internally reinforced polyethylene laminates that have been designed for a wide range of prospective applications. When a project requires a product that protects against light, weather, contaminants and other elements, specify Griffolyn®. It is performance engineered to be highly resistant to tears and punctures with an exceptional ability to withstand extended exposure to weather.

Griffolyn® offers many special features that set it apart from other products. It is UV stabilized for long range storage to allow your company to free up warehouse space. It is also fire retardant for safety applications around critical materials and work areas. Reef also has stock sizes available for immediate shipment.

Should a project require a custom product, Reef can fabricate to meet specific requirements. Additional features such as anti-static, corrosion inhibitors and heat shrink ability are also available.

Use Griffolyn® for containment, storage and shipping protection, dust and environmental enclosures, waste disposal bags, tents, contaminated soil covers, pallet covers, equipment storage or any of a thousand other applications.

When that project comes up that calls for something custom, Griffolyn® can help. Materials can be custom manufactured and tailored to meet the exact needs. There is a wide selection of products and material grades to choose from.

REEF INDUSTRIES, INC. offers performance engineered products specifically designed to meet a diverse array of industries. Reef aims to provide superior quality and value at a fair price.

Reef offers custom manufacturing and fabrication tailored to exact needs

from a wide selection of products and material grades. Reef also offers the most experience and capable sales staff committed to meet each customers need in a timely and courteous manner. Reef values its customers and strives to have the most utmost integrity in all dealings. Call on Reef for your next project.



FOR MORE INFORMATION VISIT OUR WEB SITE AT www.reefindustries.com OR CALL TOLL FREE 1.800.231.6074



Reef Industries, Inc.

PO Box 750250

Houston, Texas 77275-0250

P: 713.507.4200 F: 713.507.4295

Email: ri@reefindustries.com

CUSTOM CONTAINMENT FOR STORAGE AND SHIPPING



Help to contain or protect with durable covers, liners, bags, and tarps. Griffolyn® internally reinforced polyethylene laminates have been especially engineered to be highly resistant to tears and punctures with an exceptional ability to withstand extended exposure to weather. Save time, money and labor with custom containment and storage solutions from Reef Industries, Inc.

- ❖ General purpose, heavy duty and high performance materials available
- ❖ Custom sizes and fabrication to meet specific application requirements
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- ❖ Special features such as anti-static, fire retardancy, corrosion inhibitors and heat shrinkability offer unique performance characteristics

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WWW.REEFINDUSTRIES.COM

Improving Emergency Collaboration

The key to success in emergency management and business continuity is in the pre-planning stage. In the nuclear power industry, on-going drills provide opportunities to assess readiness and procedures.

The world leader in teleconferencing technology, Forum Communications, has introduced the next generation of emergency communications solutions to replace outdated firebar/red phone systems. If you are still using 1980's technology you put your staff and your community's safety at risk.

The Forum solutions offer the flexibility to fit your specific contingency programs. This solution can save corporations millions of dollars by enhancing business continuity and coordinating worldwide resources. Forum's **Symposium Enhanced Firebar** for instant notification and collaboration provides all functions needed for find-me application, business continuity management, and is internet accessible.



Figure 1 shows view of five pre-set emergency groups

The system administrator creates multiple 'emergency groups'. Each group will contain the contact details for particular responders by emergency type (e.g., HAZMAT, FEMA, fire, medical, & engineering). One individual can belong to several groups. Each person can provide up to four contact numbers (cell, home, etc.) and indicate their available times. The dispatcher can easily initiate the dial-out to the correct list or lists.

Applications for the Symposium Enhanced Firebar are not limited to fire and medical response. This solution allows enterprise organizations to connect regionally or globally in the event of a local or widespread emergency to immediately inform support personnel and to implement and manage the appropriate contingency plan.

With Symposium's Enhanced Firebar functions and find-me capability, management is better equipped to handle non-emergency events as well. By pre-planning the information flow and utilizing quick delivery, organizations can respond swiftly to changes in their business climate and better manage their resources.

Forum Communications offers several smaller instant collaboration systems to match specific needs and budgets. The Confer ALERT Plus is a hybrid system that integrates ring-down circuits and (PSTN) public telephone network or PBX interface for on-campus response communication. Forum's systems are recommended by federal and military agencies.

ABOUT FORUM

Providing reliable conference solutions for over fifteen years, Forum Communications International, provides the widest and deepest product line for business and emergency teleconferencing. Visit their website at www.forum-com.com or call 972-680-0700, ext. 2 for technical sales.

Planning Your Emergency Communications to Minimize Damage and Human Cost:

- 1) Identifying 'emergency specific' groups requires improved inter-agency co-operation.
- 2) Use of 'availability' information maximizes the chance of reaching available responders, saving precious time.
- 3) 'Blast dialing' and email/paging to first responders reduces the overall response time.
- 4) 'Find-me' technology improves the probability of connecting individual first responders.
- 5) Integrating simultaneous email, SMS (Short Message Service) and Pager-based messaging increases success rate in disseminating time-critical emergency details and orders.
- 6) Internal recording capabilities and event log with time stamps, simplify post-event analysis.
- 7) Symposium can be used as a notification system to cover a wide area for general emergency announcement.

Symposium, Confer and ALERT Plus are copyrighted by Forum Communications, Richardson, TX, Made in USA.

TRAGEDY STRIKES

Are You Ready?

BE READY before tragedy strikes again,
to **CONNECT**,
to **WARN**,
to **RESPOND**.

Before the next tragedy...

Replace aging Firebar/Crash technology

**Choose Reliable Emergency Solutions:
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Before more valued lives are Lost...

PROTECT...Your Community

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**Before the next time,
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FORUM
COMMUNICATIONS INTERNATIONAL

NFS team members TVA and SRS receive accolades for HEU downblending project

Whether its converting nuclear weapons material for commercial power, medical research or final disposition, Nuclear Fuel Services, Inc. (NFS) is proving the value of downblending as a smart alternative to storage or disposal.

"NFS is proud of its role with various public and private organizations to make the Blended Low Enriched Uranium (BLEU) Project such a success," explained NFS Vice-President of Business Development Frank Hahne.

The BLEU Project is converting more than 39 metric tons of surplus highly enriched uranium (HEU) for use by the Tennessee Valley Authority (TVA) in its commercial reactors. The project is a collaborate effort between the Department of Energy's (DOE) National Nuclear Security Administration (NNSA), DOE-Environmental Management (EM)



The first shipments of LEU feedstock leaves Erwin, TN in 2004.

and the TVA. Two private companies, NFS and Framatome-ANP complete the project team.

The BLEU project received the TVA's Innovation and Technology Award. The Savannah River Site was also recognized for excellence by the Department of Energy, receiving the Secretary of Energy's Excellence in Acquisition Award.

NFS is a pioneer in downblending technologies. Operating one of only two privately owned Category 1 NRC-licensed facilities in America, NFS began the practice of downblending enriched uranium for the commercial fuel cycle in the 1990s. Today, the scope and volume of downblending projects have grown significantly. NFS is downblending over half of the surplus HEU while Savannah River Site (SRS) is

downblending the balance.

In 2005, NFS continues to downblend HEU for the project. Providing low enriched uranyl nitrate, the material is then converted into the newly constructed and licensed uranium oxide powder by Framatome-ANP at its Erwin, Tennessee facility. Later fabricated into pellets and fuel assemblies by Framatome-ANP, the

"NFS is proud of its role with various public and private organizations to make the BLEU Project such a success." – Frank Hahne, Vice-President, Nuclear Fuel Services

converted material is now producing electricity through the TVA's Brown Ferry commercial reactors. The first core loading was completed on-schedule this Spring. The utility estimates the BLEU Project will provide 15 years worth of nuclear fuel for two of its reactors and will save U.S. taxpayers more than \$500 million dollars in storage and disposal costs.

At Oak Ridge, NFS and partners formed Isotek Systems, LLC to design, construct and operate another important DOE downblending project known as the U-233 Project at Oak Ridge National Laboratory Building

3019. In addition to downblending the material, the ultimate goal of the project is to separate thorium-229 from a large quantity of enriched uranium-233 then render the uranium as non-weapons usable. The thorium will be used to extract actinium-225 and supply its daughter product, bismuth-213 for ongoing cancer research.

The final product will be used in

Phase II clinical trials for the treatment of acute myelogenous leukemia. For Oak Ridge and the DOE, the project represents a solution for disposition of the material, some of which has been stored since World War II's Manhattan Project.

"NFS is a pioneer in nuclear recycling. Through downblending, we are helping solve the dilemma of what to do with tons of surplus nuclear material. Another key aspect is that overall savings through downblending, when compared to storage or disposal, is significant," said NFS Chief Executive Officer Dwight B. Ferguson.



NFS converts HEU into LEU in the form of uranyl nitrate.

Boundless *innovation.*
Proven *expertise.*



Specialty Thorium
& Uranium Fuel
Manufacturing



Plutonium Oxide
Manufacturing



Advanced
Fuels Research
& Manufacturing



HEU-to-LEU
Conversion



U-233 processing
for new cancer drugs

A new age in nuclear energy has emerged, yet one name remains as a pioneer in fuel research, development and manufacturing. A 46 year heritage that saw Nuclear Fuel Services, Inc. involved in many key milestones in America's nuclear age makes it the smart choice for tomorrow's next advancement in nuclear power. Learn how NFS is helping America address its energy future. Call 423.743.1789 or visit us at www.nuclearfuelservices.com.



The Smart Alternative

A Nuclear Industry Partner for More Than 30 Years

Client Site Services

Duratek provides processing technologies such as assay, compaction, solidification, and patented liquid waste processing systems (more than 1 billion gallons of liquid waste processed to date) that allow for expedient stabilization and volume reduction of radioactive material prior to packaging and shipment for final disposition. With over 200 trained professionals, instrumentation and remediation equipment, container and cask fleet, and mobile radioactive material licenses, Duratek can support fuel "pool to pad" projects; fuel pool cleanups; large component licensing, removal, and packaging; and emergency response services.

Nuclear Facility Operations

Duratek has safely operated dozens of treatment, storage, and disposal facilities at major DOE sites and held infrastructure surveillance and maintenance responsibility for more than 200 other active and inactive facilities across the DOE complex. Our record of regulatory compliance and safe performance is due to our highly trained, multi-disciplined field team skilled in radioactive/industrial waste processing, infrastructure services, management of stored nuclear materials, and characterization and demolition of unused structures.

Decommissioning and Site Closure

Duratek has provided characterization, reme-

diation, decommissioning, and/or waste management services on over 200 decommissioning projects (at over 50 facilities) that include nuclear reactors (power, training, research, and test); DOE and DoD sites; fuel cycle facilities; and industrial, medical, and radiopharmaceutical facilities. We have a unique combination of on-site waste management capabilities, transportation logistics, and off-site processing facilities, complemented by an inventory of radiation instrumentation and decontamination equipment. Duratek supports DOE site closure initiatives and actively performs on over 10 large-scale D&D projects at sites across the country, including Hanford, Oak Ridge, and Savannah River.

Transportation Logistics and Engineering

Duratek's wholly-owned subsidiary, Hittman Transport Services, transports over 300 shipments each month and maintains the largest dedicated fleet of casks (65) and transport vehicles available in the U.S. Utilizing multi-modal options (rail, river, and highway), Duratek also provides logistics and engineering services for transporting large components (reactor pressure vessels, steam generators, pressurizers, etc.) and has moved over 60 large components in its operating history.

Fixed-Base Processing Facilities

Duratek owns and operates licensed facilities that are accessible by rail, river, and highway and are located in close proximity to many nuclear power plants and federal sites. We offer innovative and proven treatment technologies for processing a wide range of LLRW, such as liquids, sludges, oils, DAW, and metals. Incineration and supercompaction produce reliable and stable waste forms suitable for disposal while providing maximum volume reduction. Our bulk waste assay program separates clean from contaminated material, allowing for maximum disposal of clean material at an industrial landfill versus a LLRW disposal site. Metal melting produces shield blocks for reuse by DOE and other institutions. Lead casting recycles lead to produce shielded containers. We have space, equipment, and staff (including government-cleared personnel) for services including receipt, consolidation, and repackaging; dewatering, and solidification; and decontamination and release of equipment and components.

Waste Disposal

Duratek's wholly owned subsidiary, Chem-Nuclear Systems, LLC, has operated the state-owned Barnwell LLRW Disposal Facility since 1969 without interruption. At DOE's Oak Ridge Reservation, Duratek designed, constructed, and operates (since 2002) a disposal facility that accepts waste from site-wide cleanup. By 2008, we will have disposed of more than one million cubic meters of waste. Duratek has also operated the Environmental Restoration Disposal Facility, located on the Hanford Site, continuously since its opening in 1996. To date, we have placed more than 5.2 million tons of radioactive waste at the disposal site.



Duratek

**Delivering Innovative Technologies,
Services, and Environmental Solutions
for a Cleaner, Safer World**

Corporate Headquarters.....410-312-5100
Emergency Response.....1-877-RAD-PROS
Commercial Site Services.....865-425-4600
Hittman Transport Services....1-800-HITTMAN
Logistics and Engineering.....803-256-0450
Federal Services.....865-481-6300
Waste Processing.....1-800-663-2966
Barnwell Disposal Facility803-259-1781

www.duratekinc.com NASDAQ:DRTK

A VALUE-DRIVEN COMPANY
Safety & Compliance, People, Integrity, Quality, Innovation, Excellence in Customer Care

Ansaldo Camozzi: New Energy for the Energy Industry

Ansaldo Camozzi Energy Special Components is a company leader in the production of steam generators and special heavy components for the nuclear industry, and manufacturer of large telescopes.



Ansaldo's experience in the manufacturing of nuclear steam generators is based on over thirty years of design, engineering and fabrication capability.

meeting a wide range of steam generators design requirements. Ansaldo-Camozzi supplied the largest steam generators ever built which, completed, weighed over 700 metric tons each.

Large components, like reactor pressure vessels and core structure components, have been designed, fabricated and tested in the Ansaldo Camozzi facility.



CAMOZZI

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info@ansaldo-esc.com - www.ansaldo-esc.com



Our steam generator engineering development starts with the systems interface and includes thermal hydraulics evaluation, flow induced vibration analysis, mechanical design and final stress report.

This experience has been acquired over many years through our close working relationship with the world's major NSSS suppliers.

Ansaldo has held and/or presently holds license agreements with Westinghouse and Siemens (KWU).

Ansaldo-Camozzi has capitalized on this variety of agreements to offer solutions



New energy for the energy industry

Every nuclear plant presents unique opportunities for Ansaldo-Camozzi to demonstrate their ability to solve problems.

Putting our vast experience to work on innovative solutions to your specific needs, pays off.

Ansaldo-Camozzi expertise in the nuclear field brings a wide variety of solutions to your specific needs.

As an example, Ansaldo-Camozzi has designed and fabricated a first -of-a-kind structure for big steam generators overland transportation



Ansaldo was the first company outside the USA to obtain the "N" and "NPT" ASME code qualification stamp in 1973.

This ASME approval has been continuously maintained and was later extended to include the "NA" qualification stamp for shop and field assembly.

In 1977 Ansaldo was listed in the NRC White Book and in the same year obtained the TUV type approval Certificate.

The effective definition, application and continuous supervision of the Ansaldo Camozzi Quality Assurance Program System is assured by skilled personnel.

The Ansaldo Camozzi Quality Assurance is fully in compliance with the ASME requirements as well as the requirements of other national and international standards.

In 1994 Ansaldo Camozzi obtained the certification of the quality System according to ISO 9001 which has been continuously maintained (Vision 2000).

In 2004 Ansaldo Camozzi obtained from ASME the N3 Qualification for the fabrication of spent fuel transportation casks.



Ansaldo Camozzi Energy Special Components S.p.A.

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ADVANCED CANDU REACTOR — 1000™ (ACR-1000™)

For more than four decades, CANDU® plants have operated safely around the world. AECL's latest product, the ACR-1000, sets the standard for the new generation of nuclear power plants for constructability, operability, maintainability and economics.

"When AECL launched the ACR product, the objective was clear," says Dr. David Torgerson, AECL's Senior Vice President and Chief Technology Officer. "Customers told us to reduce costs to be competitive with natural gas and other generating sources while building on the unique safety and operational advantages of the CANDU design." In response, AECL reduced the size of the reactor core, went to light water coolant, introduced a state-of-the-art control room, and implemented innovative construction techniques to minimize project schedule.

The ACR design retains the CANDU hallmark features such as on-power fueling, automated reactor control systems, and dual independent shut down systems. The ACR-1000 uses the same two-loop reactor coolant system layout as the successful and proven CANDU 6; it also has the same core size, but with 60% more power due to enhancements to the core and fuel design.

AECL has led the nuclear industry by completing its last five projects – in China and Korea – on or ahead of schedule and on budget. AECL's last project – two CANDU 6 units in Qinshan, China – astounded the industry by coming in four months ahead of schedule. "Project management is vital to our success and we have the best project management team in the industry," says Dr. Ken Petrunik, Senior Vice President and Chief Operating Officer at AECL. The first Qinshan unit, built in 54 months from the first concrete to in-service was the fastest nuclear power plant ever built in China. "We've always had great working relations with our customers and business partners," says Petrunik. "It's all about teamwork." AECL's most recent project in Romania continues this tradition of outstanding performance. It also demonstrates AECL's unique ability to provide innovative financing and deploy unique project models.

Another contributor to AECL's success is the use of modular construction techniques. At Qinshan, modules were fabricated off site, shipped to site when needed, lifted into position through the top of the reactor building with a heavy lift crane, and then lowered into place. The combined use of modularization and open top construction reduced the number of workers on site, allowed more parallel sequencing of activities, improved workflow, reduced the project schedule and improved quality. The approach worked so well that AECL has designed the ACR-1000 to take full advantage of this technique. As a result, the ACR-1000 will improve upon the exceptional Qinshan schedules with a construction period for later units of only 42 months.


Lower capital cost and shorter construction period are only part of the ACR-1000 story.

Lower capital cost and shorter construction period are only part of the ACR-1000 story. Unlike other reactor designs that have to shut down every 12-18 months to refuel, the operating cycle for the ACR-1000 will be three years with one 21-day maintenance outage. Other maintenance work can be performed at power. The result is lower operations and maintenance cost and higher capacity factors. "We've been able to lower O&M cost by designing for reliability and fully leveraging the benefits of on-power fueling. The ACR-1000 operator has greater flexibility in the scheduling and execution of maintenance outages," says Dr. Torgerson. Moreover AECL's use of localized supply and its responsive operations support teams ensure that its utility partners receive rapid and effective product support during the entire plant lifecycle.

The ACR has completed the pre-application stage of Design Certification with the U.S. Nuclear Regulatory Commission and detailed planning for the Design Certification of the ACR-1000 is under way. The ACR-1000 will meet or exceed all USNRC and international requirements.

Building on more than 50 years of CANDU development and operating experience, the next generation ACR-1000 will provide a safe and economical solution for new base-load generation at home and abroad.

www.aecltechnologies.com



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POWER THROUGH PARTNERSHIP



OUR COMPANY

WMG, Inc. is a privately held small business firm located in Peekskill, New York. Since its founding in 1979, WMG has provided professional services to both government and commercial clients. Our staff has experience at most of the nuclear power plants across the country and at many of the government facilities in the United States.

WMG has traditionally served the nuclear industry and the government in all aspects of radioactive materials management. Our staff knows what is required for characterization, processing, packaging and shipping radioactive materials through hands-on experience. They also know the guidelines and regulations that govern radioactive materials management decision-making and fully appreciate the economic consequences of these decisions. Our projects have supported both commercial and government clients with disposition of radioactive materials comprised of large components, contaminated equipment, GTCC waste, mixed waste, TRU waste, LLRW, filters, sludge/resins and spent fuel.

Our combination of nuclear engineering, software design capability and project management skill makes WMG unique. We bring a broad spectrum of experience that provides our clients with a reliable and efficient source to help manage their most challenging radioactive waste issues. This breadth and depth of experience at operating facilities is applied to every assignment we undertake, be it a comprehensive evaluation of a client's practices or providing the design for licensing of a reactor vessel shipping package.

Our many clients within the nuclear industry recognize WMG's reputation as a high quality provider of expert nuclear services. We are well respected by government agencies, including the United States Nuclear Regulatory Commission, Department of Energy, Department of Transportation and a number of State regulators, as well as the operators of the various radioactive waste processing and disposal facilities.

OUR SERVICES

WMG provides technical support of a client's radioactive materials management activities related to radioactive waste, mixed waste, irradiated components and spent fuel. Our personnel are well versed with the entire regulatory framework governing commercial and government waste and spent fuel management and shipment.

Engineering Support

WMG provides a full spectrum of technical services related to support of an operating facility or decommissioning of a nuclear plant. Projects have ranged from shielding design and analysis of a spent fuel transfer machine to development and implementation of plans for dispositioning unique forms of radioactive waste. WMG also provides on site project management services.

Major Component Disposition

WMG supports the disposition of major nuclear components such as reactor vessels, reactor pressure vessel heads, steam generators, pressurizers, reactor coolant pumps and motors, heat exchangers, fuel pool racks and other large radioactive components. Our services comprise all aspects of the work including characterization, package design and supply, transportation, and processing or disposal. We set the standards and provide fixed-price turnkey solutions.

Irradiated Hardware/Spent Fuel Pool Services

WMG provides a full spectrum of technical services related to cleanup of spent fuel pools from planning through execution and shipment.

D&D Support

WMG has supported all commercial D&D projects with its support ranging from pre-shutdown analysis to disposition of the reactor vessel. Our activities include preparation of D&D, waste management and ALARA plans, cost estimating, design and licensing support for large component packaging, cavity and spent fuel pool cleanup, liaison with regulatory agencies, supply of packaging and transport for



processing or disposal. We also provide on site support for large component or waste management projects.

Package Licensing and Permitting

WMG provides turnkey technical support for NRC licensing of both spent fuel and waste shipping packages and DOT approval of exempted packages.

Regulatory Training

WMG provides a series of training courses, which address the regulatory and practical aspects of radioactive materials processing, packaging, shipment and disposal.

TRU Waste Services

WMG has the expertise to support all aspects of TRU waste characterization, planning, and review/certification.

OUR SOFTWARE

WMG has been the leader in software development for the nuclear industry since 1982 providing computer program applications to the commercial and government sectors. WMG software is in use at over 95 nuclear power plants and commercial facilities and at several DOE facilities and waste processing facilities.

Our standard commercial software includes:

- RADMAN™
- FILTRK™
- OSM™
- MegaShield™
- TRASHP™
- RAMSHP™
- RAMTRK™
- TDAP™

WMG also provides -customized software to meet client and facility specific needs. These customized programs incorporate WMG's 20+ years of experience in characterizing, manifesting and managing all forms radioactive materials including spent fuel.

Nothing Mitigates Risk Like Experience

NUCLEAR GRADE SERVICES

- Highly Regarded Hardware Characterization
- Developing Radwaste Program Excellence
- Expert Legacy Waste Characterization
- Experienced Project Management



WVG
25 Years of
Radwaste
Management

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WORLD CLASS SOFTWARE

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www.wmginc.com



There is growing interest in nuclear power as a viable option to expanding global energy needs. Addressing concerns from energy independence to air quality, nuclear power is a proven entity. If it is to fulfill its promise, the industry has ever-higher performance standards to meet, including technological innovation, business risk-management, safety and security issues. This is true for next-generation facilities as well as existing plants. How the industry can meet its challenges is the focus of the following interview with Steve Rus, Nuclear Director of Black & Veatch, a leading global engineering, consulting and construction company.

Q: Nuclear energy seems poised for a renaissance. What are the contributing factors?

RUS: The existing nuclear plants have done an excellent job on their performance indicators, which are at peak levels, with significant improvements over the last decade. However, most of the performance upsides have been achieved, and growing electrical demand will require new nuclear power plants to maintain the nuclear base load percentage. Current and future fuel economics put nuclear power in a very favorable position.

Emissions continue to be a growing concern and nuclear is the largest emission-free source of electricity available. The new, advanced plant designs and the combined licensing process provide enhanced safety and predictable new plant costs. Interest in and acceptance of new nuclear power plants, domestically and globally, is at an all-time high.

Q: What is holding the industry back? What hurdles does it face?

RUS: A financial plan and demonstrated results are needed for new nuclear plants. In addition, the designers and builders of the new plants must commit to fixed-price scope to support financial plan requirements. Domestically, there is also the waste issue that needs to be addressed by the U.S. government.

Q: What role does technology have in answering the questions surrounding nuclear energy?

RUS: Technology has a key role as the passive, Generation III+ designs provide higher reliability with enhanced safety through simplified designs. Fuel technology, control systems and material advances are key features in the new plant designs. Design, project control and configuration/information management tools have advanced significantly since the last nuclear plants were built. The result is safer, better and more cost-effective plants in the near-term.

In the long-term, Generation IV advances will provide for future nuclear solutions that will eventually replace fossil fuels. Desalination and hydrogen initiatives will advance and will be driven by nuclear power.

into their life extensions and will continue to maintain high performance. Nuclear power will improve its position as the most cost-effective source of domestic electrical power, and Black & Veatch will be there to help the industry bring it all together.



Q: How does the new COL fit in this discussion?

RUS: The new COL process is a key driver for the new plants because it allows utilities to define their scope, in how they will both *build* and *operate*. It provides them with predictable costs and construction schedules. It also allows for a design process that does not require incorporation of numerous changes. Black & Veatch is currently a member of the task force authoring COL chapters and performing ITAAC work.

Q: Looking down the road, say 10 or 15 years, what will be the state of nuclear energy?

RUS: By 2015, there will be new Generation III+ nuclear plants operating in this country, with others being built or planned. Existing plants will be well

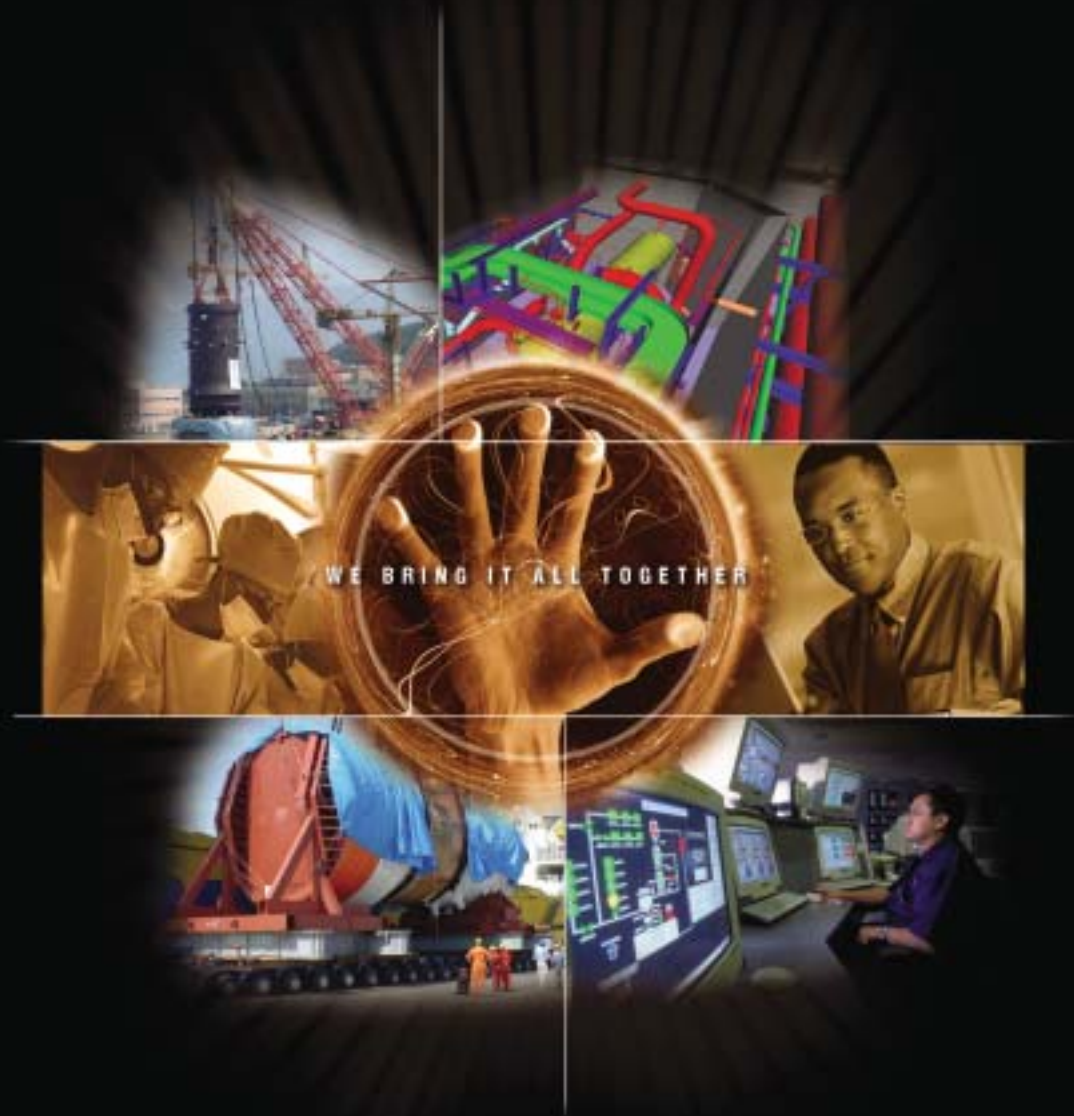
About Black & Veatch

Black & Veatch Corporation is a leading global engineering, consulting and construction company specializing in infrastructure development in energy, water, information and government markets. For more information about Black & Veatch's nuclear solutions, please contact Bob Wlodek at (913) 458-4439 or visit www.bv.com.



Black & Veatch Nuclear

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At Black & Veatch, our solutions run full circle. As engineer of choice or turnkey provider, from site studies to construction, on all regulatory, security and safety matters, for new plants or existing facilities.

Anchored in Black & Veatch's 60 years of unbroken service to the nuclear industry, our global resources integrate planning and procedures, technology and teams to generate long-term value for our clients.

Whatever your challenge, the solution will bring you back to one company. Black & Veatch. Every project, every day, we're **Building a World of Difference™**.



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The company serves U.S. government contractors, OEMs and fabricators worldwide. We offer a unique combination of equipment, capabilities, staff and quality systems that make us a reliable choice for a metal service partner and an equipment fabricator. Examples of industries served are: nuclear, defense, power, construction, mining, materials handling equipment, petrochemical, refinery,

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● A Global Leader

LEMO is a worldwide leader in the design and manufacture of circular connectors, with products sold in more than 80 countries, and a solution for almost any application, from medical equipment to test and measurement instrumentation.

● LEMO Means "Quality"

The name LEMO has become synonymous with quality and customer service, setting standards that others strive to meet. Our connectors are designed in an ISO 9001 business environment, ensuring the highest quality products for our customers.

● Custom Design

Although we offer the most extensive product line in the industry, we understand that some application needs are unique. If we don't have exactly what you need, LEMO will design and build a connector that's just right for your application.

● Cable Assembly

Expand the quality of the connector to the cable assembly with our one-stop shop value-added service. LEMO's skilled cable assembly technicians offer guaranteed assemblies to meet your specific needs.

For an evaluation sample, or more details about custom design services, contact LEMO USA at 1-800-444-5366



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Detergents, surfactants, cosmetics
Textiles, paper, ceramics
Paints, lacquers, solvents
Mineral resources, cement
Energy, power plants
Government
Air and water quality

Company Description

In April 2000, Peak Analytical, Inc., a privately held laboratory specializing in ion chromatography, entered into a partnership with Metrohm, Ltd., to form Metrohm-Peak, Inc. While Metrohm-Peak, Inc., is the sole representative for Metrohm Ion Chromatography Products in North America, the company still boasts a full-service laboratory known throughout the world for reliability, honesty and precise results. The company's focus, to provide quality products, analytical services and care for customers at fair and reasonable prices, has provided the mechanism for growth that continues today. At Metrohm-Peak, Inc., the number one priority is the satisfaction of each individual customer.

Chief Chromatographic Technique Supported

Ion Chromatography

Major Products/Services

Complete range of ion chromatography instrumentation, consumables, services, software, reagents, standards and accessories. Our complete line of products offers superior innovation, affordability, reliability, superior quality backed by unrivaled service and support after the sale. Simple to use and maintain, our products set the new standard in ion chromatography. As well, the Analytical Services Department is available for sample support, extensive methods development and analyses in the areas of IC, HPLC, CE and ICPMS.

Facilities

Metrohm-Peak, Inc., is located in Houston, Texas. The facility houses corporate offices, a main laboratory, applications laboratory, R&D laboratory and training areas.



power up and stay up

workhorse process ic analyzers

this is metrohm ion chromatography

simple to use. easy to maintain. low cost of ownership.

metrohm-peak 
ion chromatography

Complete range of ion chromatography instrumentation, consumables, services, software and accessories. Quality benchtops and onlines offer superior innovation, affordability, reliability, superior quality - backed by unrivaled service and support. fon 800.410.7118 site www.metrohm-peak.com



Competitive, Reliable Nuclear Operations

Through comprehensive, integrated engineering, construction, maintenance, safety, security, and regulatory services for nuclear plants, Washington Group International helps customers achieve system reliability and operating efficiency.

"We have supported the commercial nuclear power industry since its infancy," said Louis E. Pardi, president of Washington Group's Power business unit, "and we are dedicated to helping our customers keep their operating units at optimum performance, safety, and cost-effectiveness."

Total Life Cycle Solutions

Washington Group has designed, built, modified, and/or maintained nuclear power plants for over 50 years. The company is the engineer or constructor of record for more than 50 commercial nuclear generating units worldwide—representing a combined capacity of more than 40,000 megawatts—and has provided services to virtually every operating nuclear generating station in the U.S.

To help meet today's nuclear plant challenges the firm:

- Created a culture of safe work execution

- Helped reduce refueling outage durations to less than 30 days and, at some plants, less than 20 days
- Increased power output through power uprate programs
- Mitigated component obsolescence through digital upgrades and component replacement programs
- Enhanced human performance through empowerment, training, and continuous learning
- Integrated design and installation solutions

Washington Group's technical and engineering services include license renewal, power uprates, alternate source terms assessments, control room habitability projects, and independent spent fuel storage options, including dry cask storage. Maintenance and modification services—including component replacements, valve maintenance, scaffold management, and outage support—have been a core business for nearly 30 years. Through our consulting services organization, Washington Safety Management Solutions, the team offers premier safety integration and improvement services along with all aspects of security effectiveness assessments.

Washington Group business units serve the U.S. government's nuclear program through assignments at every production facility within the DOE complex and have major contracts at the Savannah River Site, Hanford Nuclear Reservation, Waste Isolation Pilot Plant, and West Valley as well as the Idaho, Los Alamos, Livermore, and Oak Ridge National Laboratories.

Long-Term Alliance Contracts

Through an alliance begun in 1990, Washington Group has provided integrated engineering and maintenance services at a major Midwest nuclear plant. Since 1998 the company has been the Engineer of Choice and provides services on demand at a major utility's 17 nuclear generating stations. Such alliances and long-term service contracts foster client-contractor teamwork and promote alignment with clients' business objectives.

SGT Leads the Market

Washington Group's SGT Ltd. Partnership with Framatome ANP leads the industry in steam generator and reactor pressure vessel head replacements. In fact, SGT has set repeated records on these complex, challenging projects. A recent replacement outage on an 825MW two-loop plant was completed in only 66 days. SGT is under contract to perform steam generator replacements at five units and reactor vessel head replacements at three units through 2008.



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HELPS KEEP THE PRICE OF
NUCLEAR POWER COMPETITIVE

The key to competitive nuclear power generation is operating a unit reliably, at optimum capacity and performance. That is just what Washington Group currently is doing for the owners and operators of nearly 40 nuclear generating units across the United States and abroad.

We provide integrated, cost-effective life cycle services—engineering, procurement, construction, maintenance, and quality control—focused on delivering the human performance needed in today's competitive generation market.

Washington Group is committed to helping you deliver generation from nuclear power safely, reliably, and cost effectively. To learn more, call us at (609) 720-2000.



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Kinectrics provides a wide range of advanced services for the nuclear industry, offering clients a "one-stop shop" with comprehensive expertise and proven capabilities in Life Assessment and Management, Inspection and Maintenance and Structural Integrity.

Kinectrics is a qualified supplier in North America for genuine nuclear parts, reverse engineering and Commercial Grade Dedication services. Specialized radioactive materials and analytical chemistry laboratories, and electrical testing facilities complement Kinectrics' services for generation plant.

The former technical division of a major utility in North America and now independent company, Kinectrics is recognized worldwide as a leading supplier of quality services and products for the nuclear industry.



ideas into energy

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WhoCan?

Manage complexity in times of change

We do more than manage; we move your plant forward by assessing and extending plant life and reducing planned and unplanned days off-line. We help you manage with smaller staff and deal effectively with changing ownership and accountabilities.

Provide 30 years of nuclear experience

Our depth of experience and comprehensive expertise in plant aging and life-extension programs equals fast, reliable response and practical solutions to plant problems. The end result? Reduced plant outage time. Now we're speaking your language.

Manage plant aging degradation

Extending the life of generation resources requires effective generation asset optimization, preventative maintenance and thorough capital project planning. Kinectrics delivers it all through in-service inspection, projects and modeling.

Build better performance

Plant uptime is vital, and so is safe, reliable plant performance. Kinectrics balances the two. Our extensive menu of evaluation approaches (including our Commercial Grade Dedication Service) means Kinectrics has the resources you need to test critical path characteristics, while our customer-oriented service approach minimizes your outage time.

Maximize the value of your assets

Predictive, preventative maintenance strategies, combined with effective testing and knowledgeable detailed plant analysis, are essential for asset optimization. Kinectrics gives you the advantage of advanced expertise and in-depth understanding of the complexities of today's sensitive nuclear environment.

WeCan ✓


















KINETRICS

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Alaron's mission is to provide innovative services to companies involved in the nuclear business. Alaron will achieve this goal by offering access to our NRC licensed facility to companies working within the nuclear industry that require transportation, maintenance services, space leasing, and / or decontamination for refurbishment of radioactive system components. Alaron has been serving the nuclear industry since 1983.

-  **Licensed Facility Access** - Alaron provides storage, decontamination, radiological and testing services for companies who own or service contaminated equipment but do not have a licensed facility.
-  **Dry Active Waste** - Alaron processes DAW by consolidation, compliance inspection, compaction and transload to rail for shipment to disposal.
-  **Sludges & Wet Waste** - RWE NUKEM is one of Alaron's newest teaming partners. The RWE NUKEM FBF offers the nuclear industry a cost-effective and financially sound alternative for off-site processing of liquid radioactive waste material.
-  **Metals / Large Components** - Alaron has extensive experience in Radioactive Metal Processing. Alaron has the ability to process contaminated metals in many different categories.
-  **Asset Recovery** - Through Alaron's Asset Recovery Program, your company will realize true recycling through reuse of the recovered equipment for its original intended purpose as a non-radioactive item.
-  **Source Recovery** - Chase Environmental Group has established a recycling service at our facility. Their Sealed Source Recovery Business provides customers with the ability to consolidate sources prior to disposal, have their components disassembled to separate the source from the lead shielding, and recycle their Americium rather than disposal.
-  **Motor Refurbishment** - EMC, Inc. (Electric Motor & Contracting Co., Inc.), and Alaron have joined together as teaming partners to offer our customers an extensive motor refurbishment service. As a group, we can handle small to large motors (RCP's) both safety and non-safety related.
-  **Pump Refurbishment** - Alaron has joined efforts with several different Pump Refurbishment Companies to provide a variety of services to the Nuclear Industry. Several successful projects have been completed with our "Pump Partners".
-  **Transportation** - Alaron maintains a variety of shipping containers to service different needs including waste transportation, motor and pump transportation, high radiation components, as well as other large components. Alaron has upgraded it's infrastructure capabilities to support many different truck-to-rail transload projects.
-  **Spent Fuel Shipping** - With the expected opening of Yucca Mountain in 2012, Alaron is designing a new building that will house cask-handling equipment that will be used to transport spent fuel to Yucca Mountain. NAC International is Alaron's teaming partner offering this service.
-  **Storage** - Alaron has over 150,000 square feet of indoor storage space, and approximately 25 acres of outdoor space. Customers utilize the storage facilities for many different reasons.
-  **"N" Stamp Weld & Fabrication** - Alaron has invested in many different machines that make up Alaron's Machine Shop. Alaron has teamed with Ionics to offer "N" Stamp services.
-  **Machine Shop** - Alaron offers all of its machining equipment to companies that need to perform work under an NRC license but wish to use their own machinist.
-  **Coatings & Painting** - Alaron applies Nuclear Service Level I or other specification coatings. Alaron maintains coating facilities, equipment, and a crew of coatings specialists trained to industry standards.
-  **Special Projects** - Alaron's service capabilities are flexible enough that we may be able to work with you on other Special Projects or Services that may not be listed here. Please contact us with your questions, special problems, or ideas that you may have.

Visit our website for more information.
www.alaron-nuclear.com

Contact: Steve Ferguson (513) 583-1744 ferguson@alaron-nuclear.com



ALARON

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Innovative Solutions for Nuclear Components



Focus on quality and innovation

From its roots as a foundry in the mid-19th century, to its success today as the only company manufacturing steam generators in North America, Babcock & Wilcox Canada has maintained its focus on quality and innovation.

The company's achievements and longevity have been built upon a strong commitment to work with customers to achieve outstanding results.

By successfully combining engineering, manufacturing, and service expertise with investments in research and development, B&W Canada has produced proven designs for steam generators with excellent operating records. More than 260 B&W nuclear steam generators provide power around the world with a record of unparalleled performance.

Today, B&W Canada continues to apply these same high standards in supplying replacement nuclear components.

Replacement steam generators

Drawing upon its broad background in the supply of steam generation equipment, B&W Canada started designing and manufacturing nuclear steam generators for CANDU reactors more than 40 years ago.

The extensive knowledge and experience gained from the CANDU program provided a strong base for designing and manufacturing replacement steam generators for the U.S. pressurized water reactor (PWR) market. Current B&W supplied PWR replacement steam generators incorporate the same uncompromising attention to detail and quality.

With design and manufacturing innovations such as lattice grid tube supports, CAP steam separators, and the application of a variety of alloys, B&W Canada continues to set the standard for the performance of steam generators and has earned its position as a leader in supplying replacement steam generators for the U.S. market.

Replacement reactor vessel closure heads

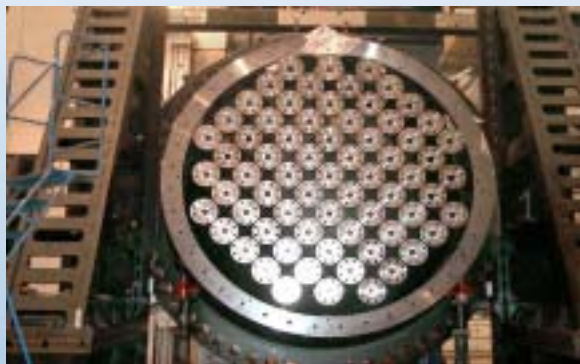
With the same commitment to quality and innovation that led to success in the replacement steam generator market, B&W Canada supplies replacement reactor vessel closure heads with Alloy 690 nozzles for every type of pressurized water reactor.

In response to the unique challenges posed by stress corrosion cracking, B&W Canada's replacement RVC heads are designed to reduce operating stress and manufactured to reduce residual stress.

In addition, B&W Canada offers integrated solutions, such as an enhanced service structure design that minimizes inspection time, improves outage schedules, and reduces maintenance costs.

Strong customer involvement

B&W Canada's dedicated, professional teams work closely with customers to manage projects, meet challenges, and provide effective results.



From fully integrated North American facilities, with in-house project management, engineering, international procurement, transportation, and the world's largest clean room for assembling nuclear steam generators, B&W Canada continues to build upon its proud history of exceeding its customers' expectations.

For more information on how B&W Canada can focus on your requirements, please contact:

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Focus (v) : to concentrate attention or effort

At Babcock & Wilcox Canada, we focus.

We focus our solutions to meet your unique requirements.

We pride ourselves on innovation and engineering excellence. Our nuclear steam generators have an outstanding performance record. Our replacement reactor vessel closure heads incorporate unique manufacturing processes to minimize residual stress. And our nuclear services for equipment inspection and maintenance keep your plant operating efficiently with minimal downtime.

Expertise. Attention to detail. Focus. Our approach delivers outstanding results.



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Generating Powerful SolutionsSM

ATC and Spectrum – One Vision – Endless Possibilities

By joining Argo Turboserve Corporation (ATC), Spectrum Technologies is enabling the Nuclear Industry to purchase safety-related materials and third party dedication and qualification services more efficiently and cost-effectively.

About the Utility Services Division (USD) of ATC

USD is the emerging leader in Spare Parts Management and Investment Recovery Services to the Nuclear Industry. USD has developed long-term strategic partnerships with many of the U.S. Nuclear facilities. USD provides spare parts to customers on a 24/7 basis, resulting in significant time and cost-savings for the industry. USD's extensive inventory is continuously growing, and is always available for immediate shipment. We operate warehouses audited to NQA-1 requirements under Spectrum's Quality Assurance program, which has been proven by seven successful NUPIC audits and four NRC inspections.

Spectrum Technologies, a division of ATC

Spectrum Technologies, who has built an excellent reputation for providing safety-related equipment and services since 1987, was

acquired in 2004 by ATC. This acquisition allows ATC to provide its customers with the ability to purchase USD's materials as safety-related. Together, ATC and Spectrum are well-positioned to provide the industry with Spectrum's industry-leading core services resulting in greater added value for our customers.

Spectrum, a Solution to Obsolescence Company, is a leading third party qualifier, providing Class IE Qualified Electrical, Mechanical, and Digital Control Equipment, including Validation and Verification of Software, and EMI / RFI testing services. Spectrum's quality assurance program is in full compliance with the requirements of 10CFR50, Appendix B, ANSI / ASME NQA-1, ANSI N45.2, MIL-I-45208A and 10CFR Part 21 requirements. Spectrum has had no major findings as a result of seven NUPIC audits and four NRC inspections.

Investment Recovery Services

USD's Investment Recovery Services provides the industry with a viable option for maximizing the sales of surplus, excess, and capital spares assets. USD offers a purchase and/or consignment option so that customers can

utilize a flexible, customizable option to meet their investment recovery goals.

USD is uniquely qualified to deliver maximum return on the sales of excess and surplus assets utilizing its proprietary electronic parts matching programs. These programs are established with most of the U.S. Nuclear Marketplace. Utilizing USD's NQA-1 audited warehouses, customers can ship its surplus materials directly to ATC, otherwise materials can remain at the customer site.

USD offers Investment Recovery Services for the sale of assets from decommissioned plants. In addition, USD offers expertise in the sales of Capital Spares assets.

Sourcing Services

The USD's Sourcing Services provides the nuclear industry with a viable option for supplying obsolete, "hard-to-find", and long lead-time items on a 24/7 basis. With an extensive utility network, and unique sourcing capabilities, USD can alleviate much of the procurement pressures that is placed on the industry.



www.argoturbo.com



Spectrum Technologies
a division of ATC

www.spectrumtechnologies.net



Supporting **Your** Spare Parts Needs

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(201) 232-9824 (24/7)

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(518) 878-8071 (24/7)

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**Make
The
Switch!**



Leadership by Example

Shaw Stone & Webster Nuclear Services (Shaw) offers more than comprehensive nuclear services—we offer 50 years of nuclear industry leadership.

Engineering

Shaw was the engineer/constructor for 17 U.S. nuclear plants. Shaw maintains the ASME-III (N) certification and currently offers engineering services at 31 nuclear power plant operating units.

Piping, Tank, and Structural Steel Fabrication

Shaw supplied piping to 58 of the 104 nuclear power units in the U.S. and is certified by ASME to perform all activities required for nuclear plant construction.

Plant Completions and Restarts

Building on its extensive experience in plant completion and restart projects worldwide, Shaw is providing restart services for Browns Ferry Unit 1, the only ongoing restart project in the U.S.

Plant Upgrades and Upgrades

Shaw is a power uprate industry leader with 28 projects and more than 1,700 MWe added to the U.S. grid.

Maintenance and Modifications

As the largest provider of commercial nuclear power plant maintenance and modifications services in the U.S., Shaw has

active contracts covering 34 operating units and participated in record-setting outages for PWRs and BWRs.

Spent Fuel Dry Storage

Shaw designed and licensed 4 ISFSIs; constructed 4 ISFSIs; performed spent fuel management studies for 8 nuclear plants; and provides fuel movement, and cask loading and handling services. Shaw also performed design and project management for the first-of-a-kind private dry fuel storage facility.

Decontamination and Decommissioning

Shaw has provided D&D services to 8 commercial nuclear reactors, 7 research reactors, and 1 U.S. Army reactor, as well as nuclear facility decommissioning services at 10 government facilities. Shaw recently completed decommissioning of Maine Yankee, the largest nuclear power plant D&D project in the U.S. to date.

Environmental Remediation

Shaw is a leading environmental remediation contractor for the U.S., with more than 200,000 projects completed successfully.

New Plant and Advanced Reactor Design and Construction

From the detailed design of the National Enrichment Facility in New Mexico, to design and construction of the Mixed Oxide Fuel

Fabrication Facility at Savannah River Site, to engineering support for the Lungmen nuclear power plant in Taiwan, Shaw is involved in a wide range of nuclear design/construction projects worldwide.

Shaw recently joined the Westinghouse Electric Company and Mitsubishi Heavy Industries **AP1000 Consortium**, which is proposing to provide the nuclear island, including the AP1000 reactor and technology transfer, for four nuclear generating units in China.



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a world of **Solutions**



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A Legacy of Excellence

Shaw's commitment to nuclear excellence began over 50 years ago with engineering and design services for Shippingport, the first commercial nuclear plant in the United States. That legacy continues today with maintenance services at over one-third of the nation's nuclear facilities and restart services at TVA's Browns Ferry Unit 1, the largest nuclear construction project in the Western hemisphere today.

Shaw Stone & Webster Nuclear Services

www.shawgrp.com

ENGINEERING & DESIGN • CONSTRUCTION • OPERATIONS • MAINTENANCE & MODIFICATIONS