

30th Annual Supplier Showcase

86	Alphasource, Inc.	74-75	Petersen Inc. - A Precinmac Company
93	BIRNS, Inc.	73	Photonis
84-85	BlackStarTech®	67, Cover 3	Radiation Safety & Control Services, Inc.
66	Brokk Inc.	96	Reef Industries, Inc.
64-65	Constellation PowerLabs	7, 92	Sargent & Lundy
68-69	Element Nuclear	80-81	SSM Industries, Inc.
76-77	F&J SPECIALTY PRODUCTS, INC.	94-95	Thermal Engineering International (USA) Inc. (TEi)
Cover 2-1, 60	Framatome Inc.	90-91	Thermo Scientific – CIDTEC
78	G.D. Barri & Associates, Inc.	72	Ultra Energy
61	Holtec International	87	Urenco USA
88-89	Kinectrics	62-63	Westinghouse Electric Company LLC Parts Business
79	Mirion Technologies	82-83	WMG, Inc.
70-71	NAC International		
58-59, Cover 4	Paragon		

Paragon: The nuclear industry's single-source HVAC provider

Modifying and qualifying equipment from world-class manufacturers – such as Johnson Controls – is where Paragon excels.



Paragon has exclusively supported the nuclear industry for more than 30 years as an industry-leading supplier of Safety-Related, ASME Section III, and 10CFR50.69 re-categorized HVAC equipment, including chillers, chiller controls, A/C units, fans, dampers, and more.

With a dedicated engineering and production staff, Paragon excels at modifying and custom-designing HVAC equipment for use in nuclear power plants and other safety-critical applications. Modifications to commercial equipment are especially vital for seismic and EMI/RFI qualification.



CHILLERS

Chillers are refrigeration units specifically designed to remove heat from water. They circulate chilled water through air handlers located near the spaces being cooled. Most air-cooled chillers are located outside, with water-cooled chillers located inside.

Paragon supplies multiple styles of chillers and has numerous qualified models for a broad range of applications.

Paragon ensures commercial chillers pass seismic testing by replacing brackets, adding gussets, and making other modifications as requested.



FANS

Paragon supplies both axial and centrifugal fans for new applications and can modify new fans to serve as equivalent replacements for legacy fans.

In addition to providing new, Paragon offers complete fan overhaul and repair services and provides reverse engineering services to ensure parts can be obtained for obsolete legacy fans.



DIGITAL CONTROLS

Paragon has years of experience supplying complete control systems with new chillers and upgrading old chillers to have modern digital controls. Paragon's team ensures the new systems meet all NRC and industry requirements while minimizing the licensing burden on the utility owner.

Analog controls provide limited capabilities. Older chillers frequently trip offline, potentially resulting in reduced operating conditions and ultimately reactor scrams.

Digital chillers monitor more parameters and take actions to keep chillers operating at reduced capacity, rather than simply tripping offline. By replacing the controls, plants often add 10 years to the life of an older chiller in good mechanical condition.



SERVICES AND SUPPORT

When replacing an older system, utilities should plan for long-term maintenance of new equipment. Paragon supplies the required services and support for entire HVAC systems, chiller units, dampers, and fans to keep the equipment running optimally. Paragon also supplies spare parts and components as needed for HVAC systems.

Learn more about Paragon's industry-leading HVAC solutions:



Paragon. Keeping Nuclear Cool.

Our strategic supplier agreement with Johnson Controls helps Paragon deliver industry-leading industrial chillers, HVAC systems and equipment, components, and service expertise to nuclear facilities.

Think Collaboration.
Think Innovation.
Think Paragon.

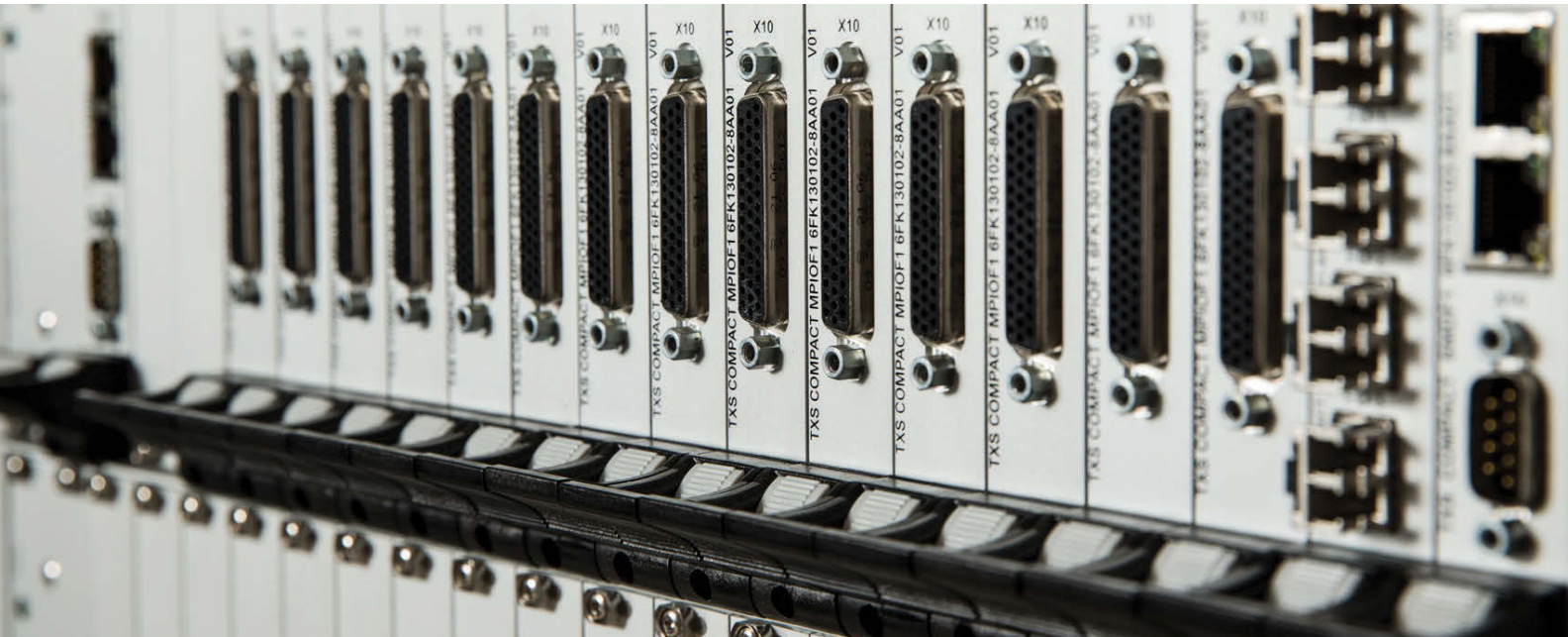


Johnson
Controls



1-817-284-0077 | www.ParagonES.com





The best choice. The best choices.

Diversity of Technology

Instrumentation and control (I&C) is crucial to your plant's safe and efficient plant operation. Protection against common cause failure is achieved through diversity of your I&C technology.

Rather than consulting with several vendors to achieve that diversity for critical I&C projects, you can simply choose Framatome. We're the only single-source supplier offering multiple options of I&C solutions: CPU-, FPGA- and analog-based, all developed in-house, all meeting the most stringent regulatory requirements for equipment redundancy, physical separation and cybersecurity.

A market leader in nuclear automation and monitoring worldwide, Framatome has the best choices of diverse, proven I&C technologies that provide upgraded reliability and certainty while meeting all your safety and performance demands, no matter which solution you choose.

Experience and Certainty

I&C modernization is critical to hitting the net-zero carbon emissions target, but the risk may make operators hesitate. Having installed more than 440 comprehensive I&C systems in all types of reactors worldwide, Framatome can put your mind at ease. Framatome modernizes I&C systems according to specific customer requirements while performing safety analysis and qualification, supporting licensing and regulatory interaction and providing operator training and updates documentation. Our solutions integrate seamlessly into existing systems and are applicable to all reactor designs (PWR, BWR, VVER, CANDU and more).

No one has more success with I&C upgrades, making Framatome the right choice to bring your systems into the 21st century. Let us put our experience and expertise to work for you and bring certainty to your modernization projects.

Support and Accountability

Whether upgrading your plant's I&C or replacing obsolete platforms, you want to be confident in your vendor's service and long-term support.

And with more than 2,400 I&C experts consulting with operators and regulators worldwide, no one beats Framatome in that regard.

Framatome provides the confidence you want, servicing and supporting our I&C systems through a combination of backward compatibility, fit and form compatible solutions, and other modernization options, all ensuring your future life cycle management.

We're a single point of accountability that will be there when you need us, guaranteeing repairs, parts availability, security patches and system upgradability, eliminating obsolescence from the equation.

Make the best choice for proven experience and diverse technology.

Choose Framatome for I&C certainty.

Count on it.



POWERING
THE FUTURE

SMR-300

A Generation Ahead By Design™



SAFELY POWERING OUR CLEAN ENERGY FUTURE

As the demand for clean, always-on power increases, we have the solution in the **SMR-300**. Our Small Modular Reactor features proven **PWR technology** with simplified safety features. The SMR-300 has the highest power density of any light water SMR, will be built by our world-class manufacturing factories reducing the need for substantial on-site construction, and by using conventional components has supply chain certainty. The SMR-300 is designed and engineered to provide clean power 24/7/365 to meet the world's growing energy needs.



Learn more about the SMR-300 and the future of clean energy at www.holtecinternational.com



Westinghouse Parts Business

The Westinghouse Parts Business plays a vital role in maintaining the critical assets of our customers and ensuring safety and reliability through the high-quality spare and replacement parts, component repair services and equipment upgrades.

Obsolescence and the ability to obtain qualified replacement and spare parts are the primary concerns in the nuclear industry. Westinghouse supports the continued operation of nuclear systems by providing solutions to individual obsolete parts by creating and managing a platform obsolescence program.

When dealing with instrumentation and control (I&C) parts, Westinghouse has experience scaling solutions (redesign, inventory strategies, sourcing, etc.) for customer needs.



Westinghouse supports multiple customers with obsolescence management for both Westinghouse designed I&C parts and obsolete components used in alternative I&C systems. The Westinghouse I&C parts team leverages this expertise to evaluate installed systems, providing options for repairs, replacements and upgrades.

The Westinghouse Solution

Westinghouse supplies unique solutions to approach power supply obsolescence, addressing concerns that are non-safety related, are of augmented quality, or are safety related with new qualifications. Westinghouse offers cost effective redesigns for power supplies (obsolete or alternate manufacturers).

Westinghouse also takes advantage of our I&C repair shop capabilities and strategic partnerships to offer options to extend the life of I&C systems, such as power supply repair, printed circuit board repair and NIS drawer refurbishment.

Industry Benefits

Westinghouse Parts Business plays a vital role in maintaining the critical assets of our customers. We ensure safety and reliability through high-quality spare and replacement parts, component repair services and equipment upgrades.

Westinghouse actively supports original OEM system components but offers many upgraded direct replacements. For example, the original NIS 25 volt power supply can still be supplied or repaired, but a direct replacement offering enhancements like improved reliability, lower heat generation (longer life), improved voltage adjustment resolution and status LEDs to facilitate troubleshooting.

Unique Methods

- Refurbishment of client-supplied power supplies.
- Refurbishment and supply of surplus power supplies.
- Modification and enhancement of commercially available power supplies.
- Reverse engineered replacements of original obsolete power supplies (cost effective, proven technology and quick lead times).
- Safety stock inventory of various OEM power supplies (including obsolete components) on-hand for expedited requests (NIS, SSPS, 730, Rod Control, etc.)



Contact us!

To learn more about Westinghouse Parts Business and our I&C obsolescence solutions for power supplies and other critical components, please contact Ashlyn Fornear at forneaam@westinghouse.com.



Power Supplies You Can Count On

When it comes to power supplies and electronics, the trusted experts from Westinghouse Parts can support obsolescence issues at **100% of the world's nuclear plants.**

To learn how Westinghouse Parts utilize modern, readily available components based on original designs, contact a specialist at www.westinghousenuclear.com/contact-us



Precision at the Core: Constellation PowerLabs' Calibration Services Redefining Industry Standards

In an industry where precision is paramount, and the margin for error is virtually non-existent,

Constellation PowerLabs stands at the forefront, providing exemplary calibration services that meet the rigorous demands of the nuclear sector. With over a century of dedicated service and technical prowess, our lab has evolved to become the epitome of reliability in calibration, testing, and analysis services.

Today, as nuclear enterprises strive to achieve exceptional operational efficiency, the integrity of measuring instruments is critical. At Constellation PowerLabs, we comprehend the gravity of this necessity and embed it into every facet of our advanced accredited calibrations, ensuring congruence with 21 CFR and ISO standards.

Accredited Calibration Expertise

Our extensive scope of services, accredited by the American Association for Laboratory Accreditation (A2LA) to ISO 17025:2017 standards, guarantees the highest echelons of accuracy and consistency. Our lab is more than a mere facility – it is an assurance of quality, where over 80,000 instruments annually are calibrated with unwavering precision. The broad spectrum includes, but is not limited to, CMM Dimensional Inspections, Pressure Gauge Calibrations, RF and Microwave Calibrations, and High Voltage Calibrations.

Appendix B Calibrations: Commitment to Nuclear Quality

Understanding the unique requirements of the nuclear industry, we offer Appendix B Calibrations. Our in-depth quality programs meet the staunch guidelines of 10 CFR 50; Appendix B, 10 CFR 21, NQA-1, and ANSI N45.2, subject to routine audits by NUPIC and NIAC ensuring sustained compliance. It is not simply about meeting standards; it is

about setting benchmarks for nuclear quality and reliability.

OneLab: Simplifying Calibration Management

Our esteemed clients gain exclusive access to OneLab, our state-of-the-art customer portal, revolutionizing the way calibrations are managed. It offers an informative repository with extensive data and historical findings on a myriad of manufacturer models and numbers. OneLab is the embodiment of customer-centric innovation – a single database to efficiently access and manage calibration records.

Vendor Management and 1-Step Procurement: Streamlining Operations

Constellation PowerLabs simplifies complex processes. Our vendor management services cut through the perplexity of handling multiple sources. The 1-Step Procurement system further streamlines the calibration of newly acquired parts by integrating procurement with testing and calibration services, thereby radically shortening lead times.

On-Site & Nationwide Reach: Ushering Convenience

Whether the task demands our technicians to perform on-site calibrations or utilize our expansive network of labs, we ensure convenience without compromise. We can facilitate swift pickup and delivery, ensuring that your equipment is calibrated with minimal downtime.

A Legacy of Excellence

In 1911, Constellation PowerLabs embarked on a journey of precision, inaugurating as the cornerstone testing center for the Philadelphia Electric Company. As electricity spurred a revolution, so did our calibration expertise. Pioneering work with the Peach Bottom Atomic Power Station in the late 1950s signaled our expansion into nuclear

and other industries, fostering an environment of comprehensive service offerings.

Entrust your calibration needs to Constellation PowerLabs, where history and innovation converge to deliver unparalleled calibration solutions. Our commitment to your success is as steadfast as our dedication to precision. Experience the PowerLabs advantage – where every measure is a milestone in accuracy.

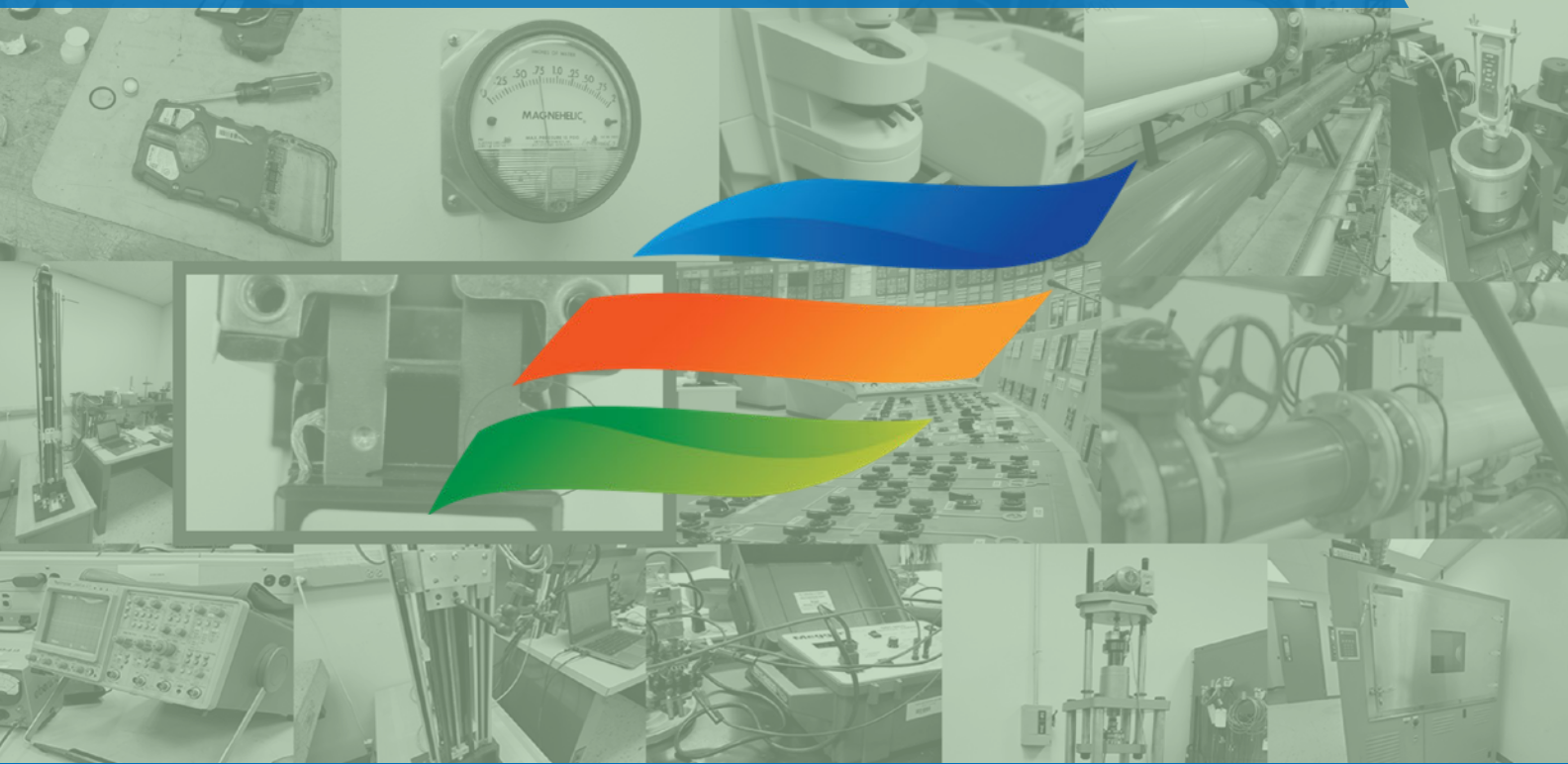
The Parts Quality Initiative (PQI)

Protect critical infrastructure with Constellation PowerLabs' Parts Quality Initiative (PQI). Our foremost program is underpinned by robust, model-specific data to preempt the risks of part failure—curtailing downtime and unnecessary expenditure. Our comprehensive database, accessible through our OneLab portal, stands on the precipice of innovation with over 2,000 model-specific test plans and historical failure trends of more than 80,000 parts.

Endorsed by the Nuclear Energy Institute with the Top Innovative Practice Award, Constellation PowerLabs' PQI not merely identifies potentially defective parts prior to installation, but it offers a threefold assurance: cost savings through defect identification, voiding unnecessary procurement charges, and most significantly, averting high-cost operational failures. Our precise understanding harnesses periodical data analysis to sophisticate continually. Trust in over a century of Constellation PowerLabs' dedication to calibration excellence and let the PQI program empower your operations with heightened reliability and fiscal prudence.



Quality, Efficient & Reliable Calibration and Testing Services



WHY US?

Our wide-ranging measurement capabilities are enhanced with a scope that is A2LA Accredited to ISO 17025. Our Quality Program is routinely audited by NUPIC and NIAC, which satisfies the requirements of 10 CFR 50, Appendix B and 10 CFR 21. When you work with Constellation PowerLabs, you will receive the highest level of quality in the industry.

OUR SERVICES



Failure Analysis



Flow Meter Calibrations



High Voltage Calibrations



Parts Quality Testing



CMM Inspection



Torque Wrenches, Transducers,
Multipliers & Screwdrivers



Pressure Gauge Calibrations



Material Testing & Analysis



Chemical Analysis & Testing



1-Step Procurement

GET A QUOTE TODAY!



1-800-971-5227

PLSales@constellation.com

ConstellationPowerLabs.com



BROKK®

Q: So how can you perform challenging, heavy duty, D&D work in Hazardous environments at nuclear sites in complete safety?

A: Well if you are familiar with BROKK remotely operated machines, you will know that over the past 40 years more than 14,000 BROKK machines have

been deployed worldwide in the most hazardous of environments. Furthermore, you may also be aware that there have been no injuries incurred by operators using BROKK equipment deployed on some of the most challenging projects at nuclear sites worldwide.

We can all appreciate the significant negative impact to a project if there is an injury, a near miss, exposure to radiation or exposure to hazardous materials for any individuals engaged on the project. This negative impact may go beyond the project, to the overall site, even to the industry itself. The use of BROKK remotely operated

equipment keeps the operators at a safe distance from the hazardous workface avoiding the possibility of injury or exposure.

BROKK Features and Benefits

An important advantage of BROKK equipment is high productivity, so safer does not mean slower. Very powerful tools are rapidly deployed by the BROKK machines to complete work effectively and to help bring projects in ahead of time and under budget.

BROKK offers hundreds of standard and custom designed tools and attachments for our machines to ensure that the best tools for the job are always available.

With these multiple attachment choices, compact size, ease of maneuverability and an intuitive control system, BROKK is now established as the nuclear industry standard for safe, powerful, reliable, rugged, high performance, remotely operated equipment. Our unmatched 40 years of deployment experience and the lessons learned from this have been incorporated into our latest generation of equipment. Many upgrades and improvements have been made to continually improve the performance of our equipment based on direct feedback and our extensive operational experience.

Innovative BROKK features such as our "NQH" auto-tool change interface avoids any operator radiation exposure on projects requiring multiple tools and a variety of functions to be performed by a single machine. Vision systems, additional radiation hardening and auto recovery systems are also available as integrated machine options where required.

BROKK Technical and Customer Support

BROKK has a dedicated internal Special Engineering Group to assist our customers in defining the best overall solution to meet the project goals. We continue to provide ongoing technical support for all of our customers after equipment delivery, through the duration of the project. We stock a full range of spare parts which are typically shipped out the same day as they are requested. We also provide on-site technical support and certified operator training at the customer's site(s) as needed.

BROKK Custom Design and Special Applications

The BROKK Special Engineering Group can also develop custom designed machines and custom designed attachments where needed for special projects. We have a proven track record of successfully working with our customers to develop and deploy application specific solutions.

For more information Contact Tony Marlow
Tel: (505) 699 8923, email: tony.marlow@brokkinc.com
www.brokk.com/us

Over 14,000 machines deployed

- TUNNELING
- CONSTRUCTION
- MINING
- NUCLEAR**
- PROCESS
- CEMENT



Extraordinary power and reliability for extraordinary jobs.

Some projects require a special solution. Brokk offers a unique and well proven combination of equipment, design, engineering and technical support for the most challenging projects at nuclear facilities.

Brokk is the industry leader for safe, rugged, reliable, heavy-duty, remotely operated equipment and with 8 available base machine options, there is a Brokk machine size available to suit each application without compromise.

Brokk machines are available with many standard options including vision systems, radiation hardening, auto tool change, auto recovery capabilities and more. They can also be customized and fitted with additional special options as needed for specific customer projects

Brokk also offers hundreds of standard and custom designed tools and attachments for our machines. With our standard quick change attachment interface or our optional fully remote tool change interface, a single Brokk machine can perform multiple tasks in hazardous environments with the operator always working in complete safety.

Now add to that over 40 years of Brokk deployment experience, our in-house engineering and technical support staff, on-site training and after sales support and you can see that Brokk provides comprehensive support to our customers who are working on very challenging projects.

For more information Contact Tony Marlow Tel: (505) 699 8923, email: tony.marlow@brokkinc.com

Original Demolition Power™



Create a realistic radiological training environment without the risk of using live sources.



Adapts OEM instrument components to reach optimal training fidelity.

Sources are 100% safe and provide realistic, detectable, high-danger radiological conditions.

Auto-response feature significantly improves training by freeing the instructor to teach, observe, and assess the trainee.

Remotely manage or control any SIM-Teq device at any time.

Next-generation drone and robotic-based detection, Man-portable Radiological Detection Systems (MRDS), and advanced identification systems are all available.

Designed and manufactured in the USA by Radiation Safety & Control Services.

SIM-Teq is a wirelessly interconnected system composed of a variety of simulated radiation detection instruments, simulated gamma/beta/neutron/isotopic mix sources, and support hardware, all controlled and configured using a simple, intuitive software application running on any Windows 10 or Windows 11 based PC or tablet.

The system is designed to meet the variety of training organization needs allowing frequent, realistic training that helps develop and maintain the skills needed by trainees to be proficient at detection, protection and decontamination.

Ideal For Training:

- Radworkers
- First Responders
- Radiation Technicians
- DOD
- CBRNe
- Academia



SIM-Teq[®]

www.sim-teq.com
contactus@sim-teq.com
1.800.525.8339



UNPARALLELED EXPERTISE IN NUCLEAR-GRADE EQUIPMENT

As a leading supplier of qualified replacement parts, Element Nuclear specializes in providing nuclear-grade components no longer available from original sources. Our Nuclear Center of Excellence in Huntsville, AL offers:

- Equipment qualification and certification for safety-related service
- Commercial-grade dedication per EPRI 3002002982
- Defense-in-depth testing for cyber security compliance
- In Partnership with Yokogawa of America, third-party qualification of Yokogawa equipment including the DXAdvanced Series of Recorders and YS1700 Controllers.

NTPQ CERTIFICATION: ENSURING SAFETY AT EVERY LEVEL

As the global supplier for Yokogawa instruments and replacement parts for the commercial nuclear industry, we certify Yokogawa recorders, controllers, and replacement parts are classified as nuclear augmented quality or safety related.

COMMITMENT TO QUALITY AND COMPLIANCE

Element Nuclear adheres to the highest industry standards:

- 10 CFR Part 50 Appendix B
- 10 CFR Part 21
- NQA-1-2008/2009 Addenda
- ISO 9001:2015 certified

Our dedication to quality ensures that every component we supply meets or exceeds the stringent requirements of nuclear power facilities.

**OpreX™ Control Devices:
Programmable Indicating
Controller YS1700**



**Yokogawa DX1000N
DXAdvanced Series
Recorders**

YOUR TRUSTED PARTNER IN NUCLEAR SAFETY

With Element Nuclear, you gain a partner committed to excellence, innovation, and unwavering safety standards. Our comprehensive services, from equipment qualification to cyber security, provide the assurance you need in the demanding world of nuclear power.

Contact Element Nuclear today to learn how we can enhance the safety and reliability of your nuclear facility.



ELEMENT NUCLEAR YOUR CENTER OF EXCELLENCE RESOURCE

The Element Nuclear Center of Excellence located in Huntsville, AL is the undisputed leader in nuclear testing. NTS offers equipment qualification (IEEE & ASME QME-1), safety relief valve testing/refurbishment, snubber services, and third-party qualification. Plus, Element Nuclear is the global supplier for Yokogawa instruments and replacement parts as well as the first lab in the US to receive the IEEE ICAP 3-star rating.

We're proud to be part of the unrivaled Element family with more than 8,500 experts across 260 locations in 30 nations worldwide.

CONTACT ELEMENT NUCLEAR — YOUR CENTER OF EXCELLENCE RESOURCE.

+1 888 786 7555

CONTACT.US@ELEMENT.COM

ELEMENT.COM

NAC's Expanded Services and Capabilities Support Small, Large and Advanced Reactor Requirements to Meet Global Energy Needs

As the nuclear energy industry grows to support clean energy goals and increased energy demand, NAC International Inc. (NAC) has expanded its portfolio of services and products. Building on 55 years of proven fuel cycle consulting, and storage and transportation solutions for spent fuel and other nuclear materials, NAC now has additional capabilities to serve both established and developing nuclear energy providers.

NAC LPT — Solutions for Radioactive Waste Management and More

NAC LPT develops best-value logistics, packaging, transport, and disposal plans, supplying equipment from a fleet of intermodal containers and railcars for LLRW and hazardous materials. Our experts provide impartial, comprehensive, cost-saving, and creative waste management solutions for government and commercial projects large and small.

NAC PHILOTECHNICS — Waste Processing, Transport, Disposal, Decommissioning

NAC Philotechnics is an integrated waste broker and processor with two licensed U.S. facilities for receiving, packaging, and shipping LLRW and mixed wastes. They are a proven service provider for decommissioning and operating laboratories, universities, industrial, and other small generators.

NIAGARA ENERGY PRODUCTS (NEP) — Nuclear Manufacturing

NAC subsidiary NEP provides high-quality, large-scale manufacturing, welding, and machining with over 220,000 ft² of floor capacity and a talented staff. They manufacture reactor components, waste containers, shielded casks, and other specialized products with precision.

Support for SMR and AR Development

As supply chains are developed for small modular reactors (SMR) and advanced reactors (AR), NAC offers these companies a wide range of products and services needed for nuclear energy facilities. A leading provider of nuclear fuel cycle solutions, NAC can:

- Manufacture SMR and AR components, fuel storage/transport containers, other equipment
- Transport fresh and spent nuclear fuel, components, and waste
- Perform logistics planning, packaging, shipping, and disposal to manage spent nuclear fuel and wastes
- Provide consulting expertise, including nuclear material accountability systems and training



TOP: NEP manufacturing capabilities can handle large-scale nuclear equipment and precision-machined components.

BOTTOM: NAC OPTIMUS-L systems are licensed for HALEU TRISO fuel.

(Photos: NAC International)

NAC and its affiliates can make many types of SMR and AR components. In addition to NEP's manufacturing capabilities, NAC's parent company, Hitachi Zosen, fabricates nuclear containers, components, and equipment at its Ariake Works facility in Japan.

NAC's expertise in transport solutions can facilitate shipment of SMR and AR fresh and spent fuel, components, and waste. We recently obtained U.S. NRC licensing for the first high-capacity transport cask for HALEU TRISO fuel and have decades of experience obtaining Certificate of Compliance amendments and foreign country validations for nuclear fuel transport.

NAC is an industry leader in storage solutions for nuclear operations, having designed, licensed, and delivered 650+ transportable storage systems for spent nuclear fuel and nuclear materials. We have adapted our NRC-licensed designs for unique waste types and can apply this skill and experience for storage of SMR and AR spent fuel and wastes as well.



For more information, please contact George Vaughan, VP Business Development at gvaughan@nacintl.com / 770.447.1144, or visit us at www.nacintl.com.



EXPANDING OUR HORIZONS

THE SKILLS AND EXPERIENCE YOU TRUST TO DELIVER NUCLEAR EXCELLENCE.

NAC International can help you chart a new course as the nuclear industry supports increasing clean energy needs. With our recent acquisitions, we've expanded our nuclear and industrial waste management capabilities, while adding nuclear component manufacturing. See the full range of services available from NAC International's family of companies.



- Packaging and transportation assets
- Rail and OTR logistics expertise
- Radioactive and hazardous wastes



- Low-level radioactive/hazardous wastes
- Waste processing, brokering, radiological services
- Decommissioning services



- Nuclear-grade, pressure boundary components, structures, and containers manufacturing
- Large-scale fabrication, welding, machining
- Shielded containers, vessels, flasks



CONTACT US: George Vaughan, Vice President of Business Development
Phone: +1 770-447-1144 | gvaughan@nacintl.com | www.nacintl.com

Ultra Energy engineers innovative measurement and control solutions that help nuclear businesses succeed

Ultra Energy's vision is to see nuclear power fulfil its potential to create a cleaner and more secure world. Our contribution is to supply nuclear-focused organisations with nuclear-qualified measurement and

control solutions that ensure they maintain the safety of critical processes, at the same time as improving their ability to achieve commercial objectives. By ensuring nuclear power continues to be among the very safest

sources of zero carbon electricity, we help the industry to grow.

- Supplying proven measurement and control solutions for large new-build nuclear plants
- Refurbishing, remanufacturing or reverse-engineering aging or obsolete systems to extend the life of nuclear fleets
- Supporting developers of SMRs and advanced reactors to reach their project and commercial goals
- Monitoring and managing the lifecycle of radioactive material to minimise safety risks

Ultra Energy has been part of the nuclear industry since its first major expansion in the 1960s and the IP we've created in nuclear safety is unique. Today, the industry faces significant challenges in its pursuit of growth but is focused on overcoming constraints on its progress. Ultra Energy shares that focus and is the supply chain partner that will deliver the critical benefits of proven solution design and manufacture capability, an unwavering commitment to quality, and the deep expertise needed to deliver innovation that is effective, efficient and compliant with regulatory frameworks.

We are certain that nuclear power is entering a new golden era. It is the best placed energy source from which to reliably generate low-cost zero carbon electricity and so support both human welfare and our responsibilities to planet Earth. It is an exciting time to be in this industry and we look forward to making breakthrough progress with our customers to change the world for the better.

ULTRA. | Energy

Nuclear safety solutions engineered for your success

- Reactor protection
- Neutron monitoring
- Temperature & pressure
- Radiation monitoring



Visit us at [ultra.energy](https://www.ultra.energy)

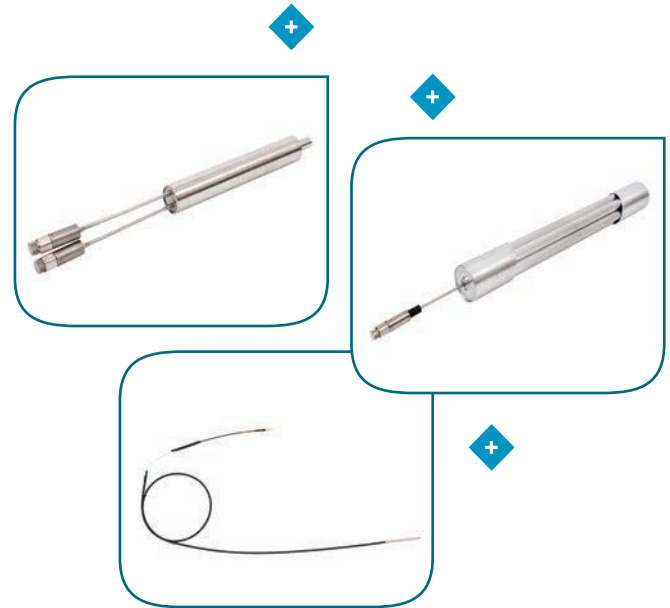
Photonis - Your Partner for Innovative & Carbon-Free Energy Solutions

Photonis, a leading brand of Exosens, is a market leader in Nuclear Instrumentation and has been for more than 50 years. Photonis designs and manufactures neutron and gamma detectors for the nuclear industry, including safety-related applications in nuclear power plants, fuel reprocessing facilities, waste storage monitoring, and nuclear research instrumentation.

Photonis has worked on innovative technologies, including fast reactors such as Phenix, Superphenix, and the Astrid project. We work not just on research reactors, but also on the fusion market with ITER and IFMIF-DONES and with commercial nuclear power plants to provide neutron flux monitors.

At the same time, we support the emerging requirements of Small Modular Reactors (SMR) and Advanced Reactors to ensure their success for a sustainable energy future. Photonis Nuclear Instrumentation caters to more than 30 countries

in the world: Argentina, Australia, Canada, China, South Korea, the United Kingdom, the United States of America, Western Europe, etc.



SCOPE OF SUPPLY

- ◆ Standard and Miniature Gamma Ionization Chambers
- ◆ Boron Lined Proportional Counters
- ◆ In-Core and Ex-Core Fission Chambers (Fixed & Moveable) rated to very high temperatures
- ◆ Mineral Insulated Cable Extensions and Connectors
- ◆ Product Development and Adaptation

CONTACT US:

🌐 <https://exosens.com/markets/nuclear>

✉ nuclearsales@exosens.com

☎ (508) 744-8769



Your Trusted Partner for Innovative Imaging & Detection Solutions for a Safer World

- ◆ REACTOR PROTECTION SYSTEM
- ◆ RESEARCH AND ADVANCED REACTORS
- ◆ SMALL MODULAR REACTORS
- ◆ HIGH TEMPERATURE SENSING APPLICATIONS

Precinmac Companies: Your Partners of Choice in Nuclear Contract Manufacturing

Precinmac Companies are leaders in advanced manufacturing, fabricating, and machining specialized and high-grade containers/casks, gloveboxes, melters, reactor services, and process equipment for the nuclear industry.

Many Department of Energy projects have relied on the Precinmac Companies' high-quality NQA-1 expertise including the Hanford Waste Treatment Plant, Savannah River Site, WIPP, LANL and more. Additionally, many clean-up, demolition, and disposal projects have contracted with Precinmac to produce process equipment to support the safety and proper storage of radioactive material.

NUCLEAR GLOVEBOXES

The majority of Precinmac gloveboxes are built by their subsidiaries, Petersen Incorporated and Major Tool & Machine. Precinmac glovebox enclosures provide a safe and controlled processing and handling system for nuclear projects. Providing only the highest grade nuclear glovebox equipment, our gloveboxes have been used in high-profile projects such as the Department of Energy's MOX project at the Savannah River Site, the Waste Treatment Plant – River Protection Project vitrification facility at the Hanford, Washington State site and LANL CMRR Project.

Our gloveboxes are used in systems like:

- UPF at Y12
- Research and development
- TRU waste processing, characterization and packaging
- Radioactive material handling
- Tritium capture and processing

CASKS

Precinmac Companies are industry leaders in the manufacturing of spent fuel containers and casks, including lead-lined. Spent fuel refers to nuclear fuel elements that have been used at commercial nuclear reactors but are no longer capable of economically sustaining a nuclear reaction.

This spent nuclear fuel then needs to be properly and disposed stored. Companies have relied on us to produce high quality containment products for safe, reliable storage of spent fuel. Our in-house proven quality systems and experience ensure that products are being manufactured to the highest standards in the industry.

REACTOR SERVICES

With more than 25 years of experience in commercial nuclear reactor services, Precinmac Companies are equipped to safely supply products that handle radioactive treatment needs. We continue to provide ongoing safe solutions to high-profile projects with the Department of Energy, utility, and nuclear related customers. Our planning and expertise ensure timely service, successful project implementation and execution for our clients.

PROCESS EQUIPMENT

Precinmac is comprised of 8 individual companies that are located across The United States and Canada. Each location offers state-of-the-art facilities, many specializing in the manufacturing of process equipment, transportation equipment, special handling and monitoring equipment, as well as spent fuel containment

containers and casks of all sizes. We also provide custom manufactured equipment for decommissioning projects.

We continue to manufacture process equipment that is used to develop and test new processes to meet the demands of nuclear facilities and technology advancements.

Our safe, customer friendly environment and experience allows the Precinmac family of precision machining & fabrication companies the ability to interface and work alongside our customers' team on a daily basis and we welcome on-site support.

CERTIFICATIONS

- ASME U, U2, S, R
- NQA-1 Compliant
- ISO9001:2015
- NRC Subpart H of 10CFR71
- AS9100 Rev D
- AISC

COMPANIES & LOCATIONS

- **Petersen Incorporated** - Ogden, UT
- **Major Tool & Machine** - Indianapolis, IN
- **MMPCO** - South Paris, ME
- **Hoppe** - Chicopee, MA
- **HPG** - Georgetown, ON
- **Trimaster** - Guelph, ON
- **Shields** - Tualatin, OR
- **Viper Northwest** - Albany, OR



PRECINMAC[®]



CONTAIN YOURSELF

Precinmac is proud to be an integral part of the clean-up of waste generator sites around the country helping to make it a cleaner and safer environment for future generations. Our companies fabricate, machine and test dry fuel storage casks, transportation casks and waste containers for the nuclear industry. In fact, Precinmac companies have delivered over 25,000 high quality containers to customers for over 25 years. We also provide custom manufactured equipment in the vitrification process as well as decommissioning projects worldwide. When it matters, and you want high quality products, call a Precinmac company.

Learn More



Find our companies:

MAJOR + **PETERSEN**
TOOL & MACHINE





F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs



Company Profile

High Volume
Air Samplers



World Calibrator



Indoor/Outdoor
Emergency Response Air Sampler
Ruggedized Enclosure



F&J endeavors to ensure its air flow measurement instruments are accurate, reliable and maximize automation for the convenience of the air sampling specialist.

F&J has a standard business strategy to implement current technology in the development of air sampling and air flow calibration instruments.

F&J implements technology driven solutions to simplify the data collection and data analysis process for the benefit of its customers.

F&J is a certified ISO 9001 and ISO 17025 air sampling instruments provider whose contributions to air sampling design ensures the air sampling specialist has the best tools to meet the ever increasing regulatory challenges in a limited manpower environment.

INTRODUCTION OF OUR PRIMARY BUSINESS

Air Flow Calibration Instruments

- High Level - World Calibrator Series - PC Interfaceable Series/User Customizable - The ultimate in end-user customization
- Mid Level - Compact Digital V.2 Series
- Level One - Mini-Calibrator Series

Common Features Include:

- Correction of Flow Rates and Volumes to a Reference T and P
- Optional correction to Ambient T and P
- Digital display of Flow, Temperature and Barometric Pressure
- Selection of Engineering units for measured and calculated parameters

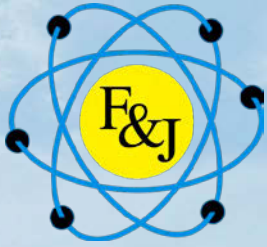
TRADITIONAL AND ADVANCED TECHNOLOGY AIR SAMPLING SYSTEMS

- High Level - Global Air Sampling Systems - The ultimate in end-user customization, data management and report writing features
- Mid Level - Digital Flow Meter Systems - Automation of the air sampling process
- Level One - Analog Systems

Common Features Include:

- Rugged, Reliable and Electrically Safe
- Technology Options to match regulatory requirements
- Pricing Options to match budgets





F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

F&J Advanced-Technology Instruments



DFCB-ABM50-100L-20Li
Emergency Response Air Sampler
Brushless Motor and AC/DC
20Ah LiFePO₄ Battery



DFCD-100L-AC
Indoor/Outdoor
Emergency Response Air Sampler



HV-1V.2
Portable High Volume
Air Sampler



TEDA
Impregnated Charcoal
Cartridges



DF-ERHV-DT
High Volume Emergency Response
Air Sampling System
(8" x 10" Filter)



Filter Holders
Plastic, Stainless Steel, Aluminum



Personal Air Samplers



*Come visit us at the
UWC-Booth 204*

Barri is a MWBE staff augmentation firm with over 30 years of experience. An industry leader, we specialize in the power industry, where we provide highly skilled labor solutions for a full range of disciplines to meet our client's short and long term project and supplemental needs.

QUALITY & EXCELLENCE

NUCLEAR <
FOSSIL <
GAS <
TURBINE
ALTERNATIVE <
FUELS

Barri actively recruits and places professional, technical and union craft personnel for operations, maintenance, capital improvement, and other projects. Our experience over the last three decades has prepared us to be an effective partner to our clients, and our knowledge of safety, labor agreements, employment rules and regulations, together with strong labor analysis and customizable reporting capabilities will help you achieve your business goals.



For more information, contact Alex M. Dorsey,
Pres./CEO or Jeff A. Wenger, CFO at

(623) 773-0410

<https://gdbarri.com/>



MIRION
TECHNOLOGIES

Mirion Technologies provides products and services for a wide range of radiation safety, measurement and scientific purposes.

Mirion solutions are employed in advanced space, technology and research applications as well as to secure critical facilities, protect people from radiation exposure and limit the spread of contamination.

Our organization is comprised of over 1700 talented professionals, passionate about delivering world class products, services, and solutions to our customers.

From our operating facilities across North America, Europe, and Asia, Mirion Technologies offers products and services in **6 key areas**:

- Health Physics
- Radiation Monitoring Systems
- Spectroscopy
- Characterization
- Dosimetry Services
- Sensing Systems


Sensing Systems Division

The Sensing Systems Division, maker of IST and IST-Conax range of products, offers a range of operational safety and non-safety radiation monitoring equipment, including in-core and out-of-core detectors and electrical penetrations. This equipment is used by power generation establishments to ensure the safe and efficient operation of their facilities. In addition, Mirion manufactures the associated electronics, temperature sensors, thermocouples, special purpose valves, connectors, cable/ connector assemblies and electrical conductor seal assemblies.

The entire Mirion team is dedicated to providing a new standard of solutions for our customers in nuclear facilities, military and civil defense agencies, hospitals, universities, commercial, state

and national laboratories, and other specialized industries.

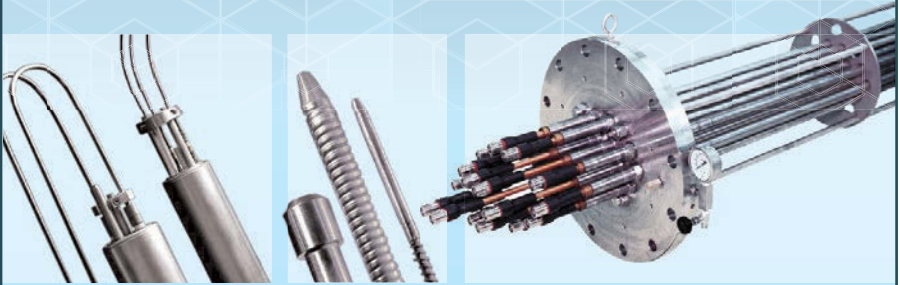
For more information about our wide range of products and services visit: www.mirion.com.



MIRION
TECHNOLOGIES SENSING SYSTEMS DIVISION

Operational Safety & Non-Safety Radiation Monitoring Equipment


Out-of-Core Detectors, In-Core Detectors & Electrical Penetrations



*Proven quality **SOLUTIONS** to meet your requirements*

Sensing Systems Division
315 Daniel Zenker Drive
300 IST Center
Horseheads, NY 14845 USA

Phone: 607-562-4530
FAX: 607-562-4482
Email: ist@mirion.com



Copyright © 2017 Mirion Technologies, Inc. or its affiliates. All rights reserved. Mirion, the Mirion logo, and other trade names of Mirion products listed herein are registered trademarks or trademarks of Mirion Technologies, Inc. or its affiliates in the United States and other countries. Third party trademarks mentioned are the property of their respective owners.

Over 40 Years of Nuclear HVAC Experience

SSM Industries has over 40 years experience designing, qualifying, fabricating and installing HVAC ductwork and equipment in DOE facilities and Nuclear Power Plants around the world.

Our Quality Program has remained in step with the latest industry requirements and can support your NQA-1, ASME AG-1, 10CFR50 Appendix B requirements. Our fabrication personnel have been trained, qualified and maintain certifications in accordance with ASME and AWS

Let us work with you on all of your HVAC needs. From custom retrofits to new plant build, we are the HVAC solution that you have been looking for.



HVAC SYSTEM COMPONENTS

- Access Doors
- Actuators: Electric & Pneumatic
- Air Handling Units
- Charcoal Adsorber Units
- Dampers:
- Backdraft
- Balancing
- Bubble-Tight
- Control: Manual, Electric & Pneumatic
- Diverter
- Fire & Smoke Guillotine
- HELB
- Isolation

- Tornado
- Variable Frequency Drives
- Ductwork & Supports
- Fans: Axial & Centrifugal
- Filters & Filtration Units (incl. HEPA)
- Flexible Connections
- Grilles, Registers & Diffusers
- Housings
- Heat Exchangers
- Cooling Coils
- Louvers
- Plenums
- Sleeves

SPECIALTY FABRICATIONS

- Angle Rings
- Cable Trays & Covers
- Control Cabinets
- Doors: Access, Heavy-Duty & Blast
- Equipment Bases
- Filter Boxes
- Fire Barriers
- U. L.-Rated, 3 Hour Glove Boxes
- Sealed Enclosures
- Seismic Supports
- Cooling Coils
- Heating Coils
- Heat Exchangers
- Tanks



(412) 777-5101 • ssmi.biz

For more information please contact:
Matt Gorman mgorman@ssmi.biz
3401 Grand Avenue, Pittsburgh, PA 15225
412-901-1467 cell/text
412-777-5101 office

Nuclear HVAC fabricator

SSM Industries, Inc. entered the nuclear industry over forty years ago as the metal fabrication division of Schneider Power, based in Pittsburgh, Pennsylvania

THE POWER DIVISION OF SSM Industries Inc. provides design, qualification, fabrication, and installation support to the global nuclear market. Over \$250 million of safety and non-safety related HVAC ductwork and components have been designed, tested and fabricated in our facility for use in nuclear power plants. We have supplied safety related equipment to most commercial nuclear power plants in the United States, as well as Europe and Asia.

SSM has performed complete HVAC fabrication and installation at seven nuclear power plants in the United States, and we have fabricated and supplied complete HVAC equipment scopes for nuclear power plants worldwide. These scopes include all dampers (bubbletight, tornado, manual, fire/smoke), fans (vaneaxial, centrifugal) and various components such as louvers, supports, grilles and registers.

Our nuclear qualified product line extends from the fan to the diffuser, and all HVAC products in between. In addition, we work with many plants to customize and perform commercial grade dedication activities.

One recent project for a European plant included designing, qualifying and fabricating a vaneaxial fan to replace an obsolete Reactor Containment Cooling Fan. With

our experience and our partners we can find solutions for your obsolete equipment.

SSM is committed to being your source for solutions, world-class products and exceptional service. We are committed to supporting any needs you have whether big or small. We believe in integrity and customer commitment in all that we do.

SSM maintains a complete ASME NQA-1 and 10CFR50 Appendix B Quality Assurance Program. SSM is listed in the NUPIC database as a pre-qualified vendor to supply Safety Related HVAC equipment and services, including the commercial dedication of components fabricated by others, to all commercial nuclear plants. ■



SSM INDUSTRIES, INC.
3401 Grand Avenue, Pittsburgh, PA 15255, USA
E: mgorman@ssmi.biz
W: www.ssmi.biz

Top row: **Truckload of duct for Vogtle 3 & 4**

Bottom row (from left to right): **48 inch round Safety Related Bubble Tight Damper**

Safety Related Bubble Tight Damper with undermount actuator

Safety Related Vaneaxial Fan undergoing performance testing





Recognized **Leader** in Radwaste Management



Helping you succeed for over 4 decades

WMG is celebrating its 45th anniversary of providing sustainable, innovative services for radioactive materials and waste management professionals. We are a leader in nuclear and radiological engineering, offering a range of specialized services to address the diverse needs of the commercial nuclear industry. In addition to performing the functions listed below, we also offer advice and peer-review in a best-practices capacity. Our services and review capabilities include:

DOSE ASSESSMENTS

Our Radiological Engineering expertise encompasses comprehensive assessments, including Off-Site Dose, Internal Dose, Site Boundary Dose, System/Equipment Shielding, Emergency Planning, and Dose-to-Public evaluations.

SEGMENTATION PLANNING

WMG are the go-to experts for Segmentation Planning, collaborating with clients to optimize the planning process for component management and packaging. Irradiated hardware, reactor internals, steam generator and other large components.

WASTE DISPOSAL OPTIMIZATION

WMG provides best practices guidance for waste management, ensuring that clients maximize opportunities for waste disposal by effectively classifying, characterizing, and packaging waste for optimized disposal.

LINER SERVICES

WMG specializes in the production of various metal liners designed to interface with commonly used casks in the industry, ranging from 8-120s to 14-215s. We offer standard designs with 1/4" thick steel shells. Depending on your needs, we can offer liners that can be lifted from the lid or from the body and we are happy to supply liners with secondary lids. With WMG, you're not just getting liners; you're investing in innovation, precision, and a commitment to elevating industry standards.



RADMAN™ A Platform of Software & Services



At 90 of 93 operating nuclear power plants (NPPs) in the US, all US NPP decommissioning projects Working with several US and Canadian nuclear related government installations Harmonized with IAEA



Service... Innovation... Value... Integrity...

CONTACT

- 📍 16 Bank Street
Peekskill, NY 10566
- 📞 914.736.7100
- ✉ info@wmginc.com
- 🌐 www.wmginc.com

TRUST

Trust is fragile. It is difficult to earn and easy to lose. As our industry has evolved, companies have come and gone, yet WMG continues to thrive, in large part because of the trust our clients have in our capabilities. Our success is entirely dependent upon your success.

Recent years have put increased pressure on our industry, and we are all asked to do more with less in the name of survival. Experienced professionals are retiring from the industry and in many cases, this process knowledge and expertise isn't being replaced.

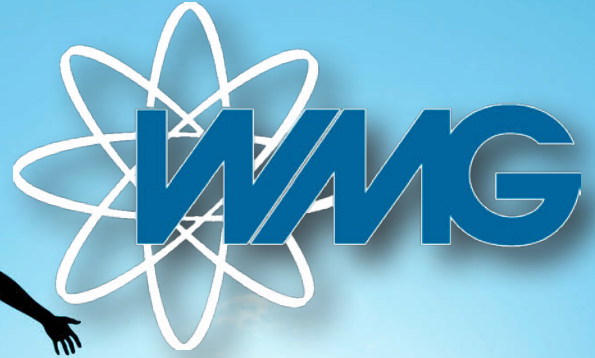
As a proud, independent, family-owned small business, specializing in software, engineering, characterization and management of radioactive material, our employees have always been our greatest asset. Our employees are recognized experts in the industry and highly respected by clients, competitors, regulators and industry groups for their capabilities and experience.

Even with all of the new challenges we face, our mission of providing excellence in radioactive waste management through service, innovation, value and integrity remains unchanged, and more important than ever.

Allow us the opportunity to earn your trust and we will show you what it means to have a partner in the industry that is just as committed to your success as you are.

Sincerely,
Kevin Tuite
President and CEO
WMG, Inc.

Service... Innovation... Value... Integrity...



Recognized Leader in Radwaste Management

Helping you succeed for over 40 years

→ ABOUT OUR COMPANY

WMG provides the nuclear industry with professional nuclear engineering, waste management and software services. Anchored by our industry-standard RADMAN™ Suite software for radioactive shipments, WMG has continued to provide innovative solutions to the industry's most complex challenges.

→ WHY CHOOSE US

As our industry has evolved, companies have come and gone, yet WMG continues to thrive, in large part because of the trust our clients have in our capabilities.

→ GET IN TOUCH

16 Bank Street, Peekskill, NY 10566
914.736.7100

www.wmginc.com
info@wmginc.com



ENGINEERING

We apply 200+ years of collective staff nuclear industry experience in our approach to solving unique waste management challenges.



SOFTWARE

WMG is committed to providing the best possible solutions for our customers' software needs. Our trusted solutions have been the industry standard for over 40 years.



SHIPPING SUPPORT

WMG's broad spectrum of experience provides our clients with a reliable and efficient resource to help manage their most challenging radioactive waste issues. We have the expertise to ensure projects are completed.

Redefining Resiliency

BLACKSTARTECH

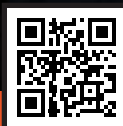
BlackStarTech® provides reliable and resilient power, lighting, battery and broadband communication products that reinvent rapidly deployable emergency response and essential power delivery solutions. With nearly a century of applied nuclear power experience, we innovated, developed and implemented targeted emergency and back-up uninterruptable power solutions that redefine FLEX response while enhancing nuclear station PRA and 50.69 applications. Furthermore, BlackStarTech innovations yield substantive productivity and cost savings for a wide variety of Outage and Maintenance applications.

In both postulated and beyond design basis scenarios, nuclear professionals may experience Extended Loss of AC Power (ELAP) situations or need immediate response power solutions to supply essential equipment that can be deployed in under 30 minutes and last for 30 days. BlackStarTech's origins centered on providing disaster and resiliency response solutions to the nuclear industry. However, our distinctive products and intrinsic capabilities apply to many unique applications for Operations, Maintenance, Chemistry, Rad Protection, Emergency Planning, Outage Management and Security. BlackStarTech even provides unique Internet of Things (IoT) monitoring and automated robotic fire watch systems that integrate with our proprietary private LTE Broadband system, addressing facility interconnectability and solving your site communications, monitoring and automation requirements.

**Genesis® Power Carts****Lightworks® BrightSites****QuantumCore®****Beacon Broadband®****FireSight® Robotic Fire Watch**

BlackStarTech solutions are specifically designed to provide immediate, dependable and even environmentally friendly carbon free power and lighting. By offering state-of-the-art energy delivery, lighting and communication deployment solutions with integrated remote IoT monitoring, BlackStarTech enables confidence in your emergency response and resiliency planning and yields significant cost savings for wide ranging applications for Operations and Maintenance, allowing stability, flexibility and sustainability for our nuclear professionals.

BlackStarTech is redefining resiliency and delivering solutions tailored to meet your specific situation. Anytime. Anywhere.


 Constellation



Genesis®

Portable, rapidly deployable power enables efficient and flexible site emergency operations and accident response as well as numerous outage and maintenance applications. Facility hardening and essential infrastructure power delivery provides tangible reductions in overall facility risk profiles. Custom portable power from 24VDC/48VDC/125VDC/250VDC to 120VAC/240VAC/480VAC 3-Phase from a battery. Unthinkable Power in hand carry packaging redefining resiliency.



QuantumCore®

Industrial battery and UPS replacements optimizing performance, enhancing life cycle cost and minimizing maintenance utilizing embedded proprietary battery predictive and diagnostic technologies. Scalable for a variety of backup power, grid tie applications, and energy storage solutions ranging from kWh –MWh scalable systems modules. Safety Battery Systems in development.



Lightworks® iSentient® and BrightSites®

Efficient battery UPS industrial lighting solutions ranging from hand held to full scale tower lighting optimizing deployment, utilization costs, and carbon emissions. Smart Emergency Lighting with predictive diagnostic and connectivity enabling remote performance monitoring and IoT automation, scalability, and sensor applications while providing significant facility maintenance cost savings.



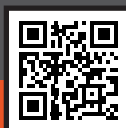
Beacon Broadband®

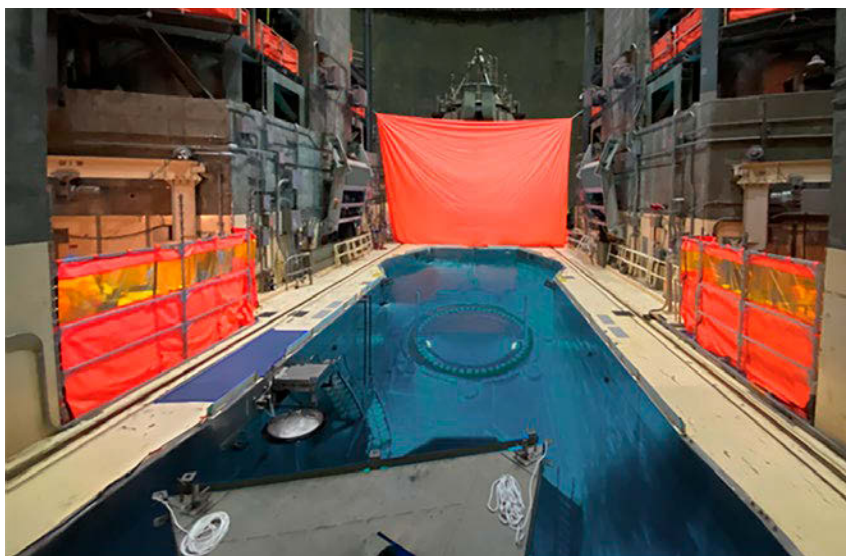
Completely functional 4G/5G private cellular networks for productivity and resiliency use cases optimizing facility broadband, IoT automation, machine learning, AI and communication applications. Field deployments operational in under 10 minutes with full V-Sat interconnectability. Resilient battery-operated configurations and hardened solutions for essential facilities and critical infrastructure. Complete Network-as-a-Service offering.



FireSight®

Industry First rapidly deployable, independent fire detection system that protects your facility from damage that can result from hot work related fires and unexpected combustible events. Eliminate resources applied to firewatches, automate degraded fire zone response, and enhance regulatory margins. Capabilities exist for detecting and monitoring steam and oil leaks with built in video analytics system.





Clearsight Containment Boundary System Custom Developed & Manufactured by Alphasource®
 Provides full visibility through FME & Drop Prevention barriers made to your specific requirements.

PROFESSIONAL POWER GEN CONSULTATIONS TAILORED TO YOUR SPECIFIC FME & DROP PREVENTION NEEDS:

CALL ALPHASOURCE: 215.844.6470 • Support@alphasourceintl.com

Alphasource is widely recognized in the industry for our commitment to high-quality products, exceptional customer service, and competitive pricing. Our team is comprised of former leaders in the Power Industry, not just salespeople. Drawing from our experience as former end-users of FME and Drop Prevention products, we offer a unique perspective to our customers, ensuring we deliver products and services tailored to their organizational and cultural needs. This approach has proven successful with our global clientele.



CellSecure™
P/N: FTS-CELLSECURE-OR

At Alphasource, our mission is to provide our Power Industry partners with products and services that optimize plant efficiency and maximize capacity or load factors. By minimizing system downtime from rework and foreign material-related issues, we aim to achieve cost-effective solutions. Furthermore, our focus on safety solutions aims to reduce dropped objects, thereby lowering accidents, injuries, and tool and equipment damage or loss within power generation plants.



Introducing our brand new drop prevention product; the CellSecure™. This flexible rubber attachment can wrap around any smartphone, quickly securing it to your person without interfering with its usability.



- ✓ **Serving America's Nuclear Power Generators**
- ✓ **Advancing Energy Security**
- ✓ **Supporting Future Fuels for the Nuclear Industry**

As the only large-scale commercial uranium enrichment facility in North America, Urenco USA (UUSA) helps provide clean, sustainable energy while working under a framework of high environmental, social responsibility, and corporate governance standards.

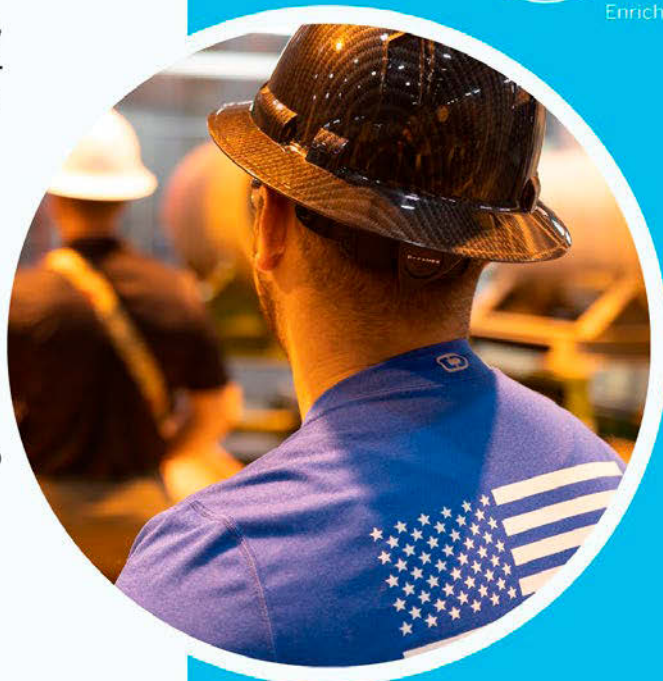
Located in the heart of the EnergyPlex, Eunice, New Mexico, UUSA delivers trusted, safe, innovative uranium enrichment services for the nuclear industry. Our leading centrifuge technology, multi-billion dollar facility and dedicated U.S. workforce is ready to fuel a sustainable, net zero world.

UUSA currently provides 1/3 of the US demand for enrichment services. Our current annual capacity is 4.4 million SWU with room to respond to increase in market demand.

UUSA is making strategic investments to provide higher levels of enriched uranium to support the next generation of nuclear reactors. We deliver on our promises and we are proud to do our part in providing clean energy to the world.



urencousa.com





KINECTRICS

Global Experts & World-Class Facilities Powering the Future of Clean Energy



Services

70+ lifecycle & technology development services



People

1300+ technical staff with vast electricity industry experience



Global Facilities

30+ unique laboratories & operating facilities worldwide



Global Nuclear & SMR Development, Safety Analysis & Licensing Capabilities



Design Engineering, Plant Systems, Project Management



OEM Nuclear Parts Supply, Custom Skids, Niche EPC



Operations, Lifecycle Management, Forensics, Decommissioning



Equipment Qualification, CGD, Robotics, Reverse Engineering, Warm Cell, High Current & High Voltage Testing



Transformer Testing & Maintenance, including insulation dry-out using Low-Frequency Heating

Join our Team. We're Hiring!

Let us open the door to a meaningful career in the energy and utilities sector, where purpose and people contribute to diverse innovative thinking and world-changing technologies.

Apply Now.

careers.kinectrics.com



Learn more at kinectrics.com

We have extensive experience supporting energy generation that will help **sustainably power a clean energy future** for today and tomorrow.



Informed design, quality fabrication, and full ongoing support allow us to develop and deliver the best tools in the business.

- Process Skid Design & Fabrication
- Reverse Engineering Services
- Tooling Development & Testing
- Tool Maintenance
- First-of-a-kind Robotics Development & Testing



Testing, troubleshooting, and qualifying materials, components, and systems for the industry and other highly regulated sectors.

Commercial Grade Dedication
Environmental Qualification
Loss of Coolant Accident Testing
Machining & Prototyping
Seismic Testing Equipment



Over 1,000 engineers and professional experts across various nuclear engineering and design disciplines to solve any challenge you may encounter.

- SMRs
- Electrical Design
- Design Engineering
- Project Management
- Design Innovations & 3D Modeling Services



- ➔ Kinectrics is the engineer of choice (EOC) for several US and Canadian utilities
- ➔ Our engineering services and technical support continually receive the highest rating in quality, predictability, responsiveness, and cost from its clients



Let's work together! Visit [Kinectrics.com](https://www.kinectrics.com) to connect with us.

The best imager for many applications.....

The only imager for some!

Thermo Scientific – CIDTEC is a supplier of radiation hardened, machine vision, and scientific cameras based on the proprietary Charge Injection Device (CID) technology for use in the most demanding imaging applications.

MegaRAD3 series

- The MegaRAD3 series of cameras are capable of operating in high dose radiation environments such as nuclear reactors, fuel inspection, hot cell monitoring, remediation, surveillance, and X-ray imaging applications. Most importantly, this capability can now be provided in either Monochrome or Color version cameras, with remote head cable lengths up to 150-meters.
- The radiation hard PPP (Preamplifier Per Pixel) CID imager technology allow exceptional signal to noise with sensitivity never before available with radiation hardened cameras.
- These cameras have been tested and proven in high levels of gamma radiation, and since readout is within the pixel, loss due to SETI's (single event transfer inefficiencies) is minimized.

- CID based cameras allow at least an order of magnitude improvement in operation when compared to CCD and CMOS based cameras and imagers.

Charge Injection Device

- The Charge Injection Device (CID) is a solid state imaging sensor with capabilities well beyond the limitations of today's consumer Charge Coupled Devices (CCDs). Like a CCD, the CID uses pixels to capture images, converting light into an electronic charge which is directly displayed on a monitor or captured digitally on computer.
- The superior resistance to radiation is a significant advantage for radiation tolerant imaging within facets of the nuclear power industry, medical, dental, and space based applications, and the inherent anti-blooming performance of the CID ensures accurate image detail even under extreme lighting conditions.
- The CID is uniquely positioned to serve the growing imaging market and the challenges for higher levels of accuracy in the radiation tolerant inspection market, as well as machine vision, scientific imaging.
- Thermo Scientific - CIDTEC is the leading manufacturer of CMOS imagers using the CID pixel architecture, and supply imaging solutions to OEM's as well as end-users throughout the world.

In the United States:

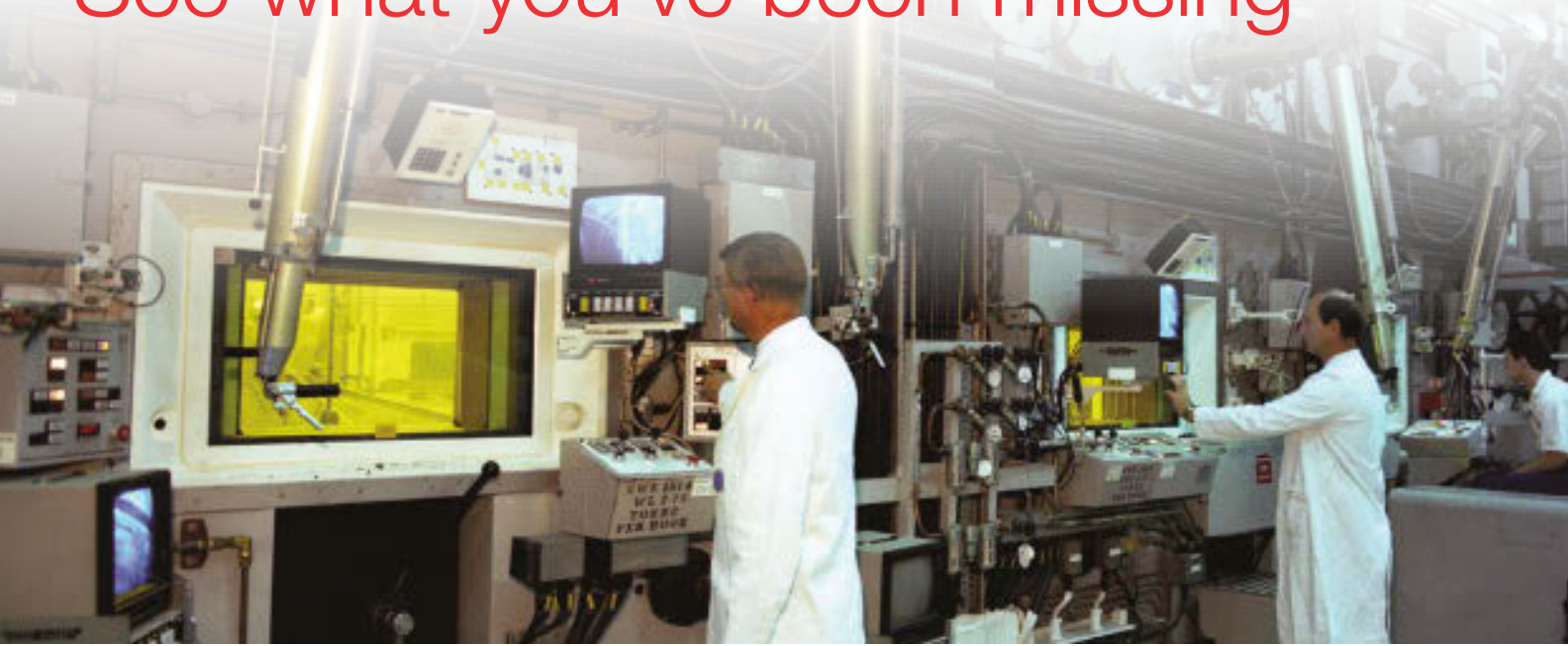
For customer service, call 1-800-888-8761
To fax an order, use 1-315-451-9421
Email: sales.cidtec@thermofisher.com

International:

For customer service, call [01] 315-451-9410
To fax an order, use [01] 315-451-9421
Email: sales.cidtec@thermofisher.com

Find out more at thermofisher.com/cidtec

Got radiation? See what you've been missing



Imaging in radiation environments just got easier

With superior capabilities for operating in radiation environments, the MegaRAD cameras provide excellent image quality well beyond dose limitations of conventional cameras, and are well suited for radiation hardened imaging applications



MegaRAD3 produce color or monochrome video up to 3×10^6 rads total dose



MegaRAD10 produce color or monochrome video up to 1×10^7 rads total dose



KiloRAD PTZ radiation resistant camera with Pan/Tilt/Zoom

In the United States:

For customer service, call 1-800-888-8761
To fax an order, use 1-315-451-9421
Email: sales.cidtec@thermofisher.com

International:

For customer service, call [01] 315-451-9410
To fax an order, use [01] 315-451-9421
Email: sales.cidtec@thermofisher.com

Find out more at thermofisher.com/cidtec

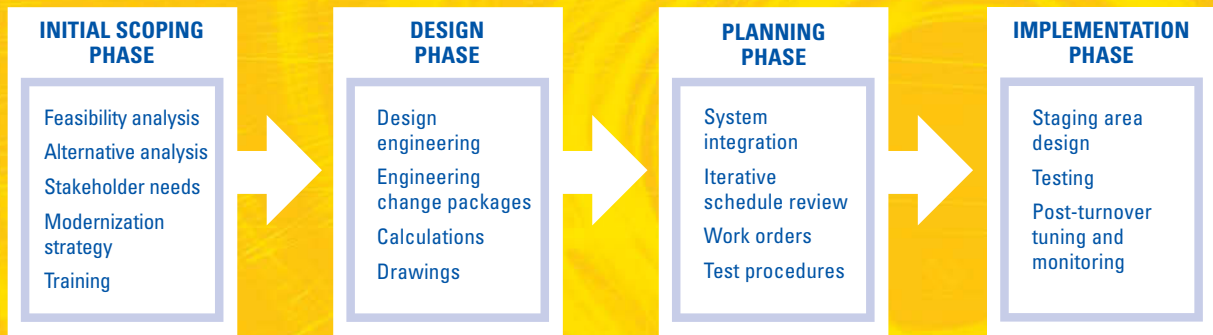
ThermoFisher
SCIENTIFIC



A Proven Leader in Nuclear Digital Upgrades

For over 65 years, Sargent & Lundy has been actively involved in design and retrofit activities for nuclear units.

We're the preeminent supplier of digital I&C services through the full digital upgrade project lifecycle and have successfully completed over 300 digital upgrade projects over the past 10 years. We understand the unique complexities of these projects and the variety of challenges our clients face in retrofit design, planning, equipment compatibility, and implementation. By leveraging our breadth of digital experience and lessons learned, we're consistently able to help clients successfully navigate these project challenges and drive projects to completion.



Sargent & Lundy is working on a rapidly growing set of consulting, technical design, and hands-on programming/system integration projects using our newly constructed I&C labs. These projects include main control room modernizations and control system upgrades that support the long-term sustainability of the U.S. nuclear fleet. When installed, our designs will enable our clients to reduce O&M costs and safely operate their nuclear assets to generate thousands of megawatts of carbon-free electricity.



DIGITAL I&C CONSULTING SERVICES

- Strategic digital licensing
- Requirements specifications
- Cost benefit analyses
- Digital platform selection
- Independent third-party reviews
- Human factors engineering
- Cyber security
- Training



DIGITAL I&C IMPLEMENTATION SERVICES

- Risk elimination
- Contingency Planning
- Configuration management
- Value engineering
- Quality planning
- Installation scripting
- Development of utility subject matter experts

**Get to know excellence.
Get to know Sargent & Lundy.**

sargentlundy.com

Enhancing Safety and Productivity for Five Decades

BIRNS has been serving the nuclear power industry since the 1970s. Today, we continue to make work inside containment safer and more efficient, with innovative lighting solutions that save operating costs and time, for everything from fuel handling and inspection to daily tasks.



The 85,000 lumen BIRNS Lumena-6™ is an advanced, intensely bright seismically qualified nuclear underwater LED floodlight that reduces fuel handling costs by bringing daylight illumination to reactor cores, fuel transfer canals and storage pools. It has an integrated power source and is certified for use in water to 70°C without life reduction.

Our seismically qualified, UL listed emergency lighting fixture (BIRNS ELF-LED™) provides up to 40 hours of high intensity emergency illumination, with integral rechargeable batteries, low 35W power draw and a 50,000 hour lamp life.



The high performance, low maintenance BIRNS Quantum™ series of high and low bay lights delivers powerful illumination for safer, more comfortable and more efficient working conditions inside containment and throughout the plant. They come in a range of configurations, all with low power draws (53W-210W) and long lamp lives (60,000-100,000 hours) and high radiation tolerances.



High Performance . . .
Under Pressure®

www.birns.com



BIRNS' Quality Management System is
ISO 9001:2015 Certified;
NRC 10CFR50, App. B Compliant

Thermal Engineering International (USA) Inc. (TEi)

Powering What's Possible

Comprehensive Solutions: We provide fully-integrated design, engineering, manufacturing, R&D, construction, and service capabilities.

Heat Transfer Expertise: A leading supplier of heat transfer technology to the power and process industry.

Fabrication Excellence: Specialized in the fabrication of surface condensers, feedwater heaters, power plant heat exchangers, moisture separator reheaters (MSRs), and Process Heat Exchangers for the Refining, Petrochemical, and Chemical Industry, including Fired Process Heaters.

Global Presence: Own and operate a dedicated manufacturing facility in the US, while also holding licenses and establishing partnerships with local shops worldwide.

Consulting Services: Offer consulting services to provide effective solutions for specific feedwater heater, condenser, MSR, and heat exchanger needs.

Replacement Parts: Provide replacement parts and components for plant equipment, ensuring optimal performance and longevity.

TEi, a subsidiary of Babcock Power Inc., has received Certificates of Authorization in accordance with Section III Division 1 of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC). These certificates authorize TEi's Joplin, Missouri facility to design and fabricate nuclear safety-related components and appurtenances.

Obtaining the ASME Section III certification required TEi to undergo a comprehensive review and establish a robust quality assurance program that meets the Code's most stringent requirements for nuclear components that play a vital safety role. As a subsidiary of Babcock Power Inc., TEi stands as the premier domestic supplier of turbine island heat

exchangers to nuclear power stations, encompassing moisture separator reheaters, feedwater heaters, and steam surface condensers.

TEi's Joplin, Missouri facility has held ASME certifications for Section VIII Division 1 (U) pressure vessels, S stamp for boiler pressure parts, and R stamp for pressure part repairs and alterations since 1979. In 2016, TEi expanded its certifications to include Section VIII Division 2 (U2), further enhancing its capabilities to design and supply safety-related heat exchanger components and services for both existing and new-build nuclear stations, including traditional largescale and modern small modular varieties.



POWERED BY PEOPLE. BUILT UPON EXCELLENCE.

NOW SECTION III DIVISION 1 CERTIFIED

TEi is a proud recipient of the Certificates of Authorization pursuant to Section III Division 1 of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC). These certificates authorize TEi's Joplin, MO facility to design and fabricate nuclear safety-related components and appurtenances.

We've supplied over 5000 units of various heat transfer equipment with over 1000 pressure vessels to nuclear power stations, including:

Over 150 MSR's In 150 Reactor Units Worldwide

Over 625 Feedwater Heaters

Over 25 Condensers & Condenser Modules

Over 200 BOP Heat Exchangers

TEi IS THE MOST EXPERIENCED SHOP IN THE UNITED STATES WITH PROVEN COMPLIANCE TO NUCLEAR INDUSTRY REQUIREMENTS

Learn more at babcockpower.com/tei



A BABCOCK POWER INC. SUBSIDIARY



Reef Industries in the Nuclear Industry

There are various components in nuclear power plants that are subjected to harsh environments. These components must be able to withstand a variety of factors including high temperatures and pressures, in addition to contaminants, dust, and debris. Griffolyn® specialty plastics can meet these requirements and bring added benefits such as tear resistance, fire resistance and UV stabilization.

Reef Industries has been providing the nuclear industry with construction, maintenance and outage protection for over a quarter of a century. Utilizing Reef's collection of custom fabrics, Reef Industries continues to provide products for plant maintenance, contamination control and reliable storage solutions.

Foreign Material Exclusion (FME) is the process of preventing outside debris into an area or areas where that debris poses an economic risk or safety hazard. FME is practiced across the nuclear power

generation community to increase nuclear safety and reduce power plant down time.

Nuclear Power Plants in the USA conduct maintenance on their Nuclear Reactors every 12-18 months during planned shutdowns (or outages) in the Fall or Spring seasons. During routine maintenance, Foreign Material Exclusion (FME) programs are used to prevent debris and foreign objects from entering components such as nuclear power generators. Preventing foreign debris is important in nuclear power plants because the presence of debris can cause outages, damage equipment, and increase the risk of worker injuries.

FME tarps help ensure that machines and parts that are important, sensitive or valuable do not get contaminated or damaged by foreign objects. This often involves extremely tight tolerances and precise measurements.

Take preventative measures to ensure components and systems are protected from foreign material with Griffolyn® reinforced

tarps. Griffolyn® provides complete around-the-clock protection by preventing outside debris from entering specific areas that can cause worker injury or potential damage to sensitive equipment.

Griffolyn® fire retardant FME covers are an economical solution to prevent excessive and unnecessary expenses resulting from fixing or replacing damaged equipment and parts caused by foreign material intrusion.

Features:

- NFPA 701 Certified
- Fire Safety & Contamination Applications
- Highly Flexible
- High Puncture Resistance
- Custom Pantone Colors Available
- Water Clear Material Available

Transport and store your equipment with Reef Industries' performance engineered and highly tear resistant custom rotor covers. Whether providing shipping, storage and protection of parts or containment and isolation of contaminated materials during new construction, maintenance or plant outages, Reef Industries can custom design and fabricate a custom cover dedicated to providing maximum protection and to improve your company's efficiency during these critical tasks.

Reef Industries has also been protecting the nuclear industry with quality plastics. Another Griffolyn product, GriffGuard is used to protect flooring surfaces. GriffGuard is a heavy duty, water resistant, and reusable/recyclable diamond plated floor protector. GriffGuard can cover decks, tiles, walkways, gradients, and other flooring surfaces which may require protection during maintenance and outage season. GriffGuard is a 40-mil black molded polyethylene diamond plate non-skid material which is easy to cut, move, or handle while providing protection around the job site. GriffGuard has been tested and approved to meet industry standards.

From FME covers to storage and transportation to floor protection, Reef Industries has you covered! We offer numerous materials to meet environmental compliance or safety requirements for critical equipment and work areas. From lightweight to heavy-duty products, Reef Industries can meet your requirements with a cover material specifically tailored to your application.

WE SUPPLY THE PROS.

GRIFFOLYN® CAN HELP WITH PLANT MAINTENANCE & OUTAGE MANAGEMENT

NFPA 701 CERTIFIED • FME PROTECTION • ON-SITE STORAGE
NO DELAYS IN OUTAGES • OUTDOOR TRANSPORTATION
STOCK ROLLS READILY AVAILABLE • HOT WORK AREAS

800.231.6074 • GRIFFOLYN.COM

GRIFFOLYN®
DIVISION OF REEF INDUSTRIES, INC.