Radwaste Solutions

Fall 2021

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17th Annual Buyers Guide

Environmental Remediation

Decontamination and Decommissioning

Waste Management

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2021 Buyers Guide

The directory sections of the Buyers Guide are kept current via annual company listing verification/update requests each June-August and new company listings that are submitted throughout the year.

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Desperately seeking change in the Delta

As I write this, I am making plans to attend several conferences this fall. Most notably, the Decommissioning Strategy Forum and the RadWaste Summit, which are being held back-to-back in Las Vegas in September, and the ANS Winter Meeting in Washington, D.C., at the end of November.

Unfortunately, the postponement of the DOE National Cleanup Workshop and the late-summer rise of the Delta variant of the COVID-19 virus has me wondering if I am making these plans in vain. As many areas of the country suffer outbreaks, it is difficult to say whether or not we will return to the previous travel restrictions.

While I strain to remain optimistic, the quick spread of the Delta variant, and seeing how some people have chosen, or rather, chosen not to respond to it has made me a bit more cynical. That so many people are unwilling to make even the smallest of sacrifices in order to protect their fellow beings leaves me to wonder.

As with any crisis, the COVID pandemic has provided us with a number of lessons. Some of those, I feel, we have learned very well. Such as how to better use technology to work remotely and the need to be more adaptive to changing situations. Yet, I fear that some of COVID's most important lessons are being lost. And those have to do with community, collaboration, and, to add a third *C*, compromise.

That last one, in particular, has become a rather dirty word in this era of hyper-partisanship. That's a shame, as compromise is needed if we are going to make any progress on anything policy-wise. Look at the current stalemate on finding a permanent solution to our spent nuclear fuel, all the result of an unwillingness to compromise.

Those other C words—community and collaboration—are ones radwaste people can teach the rest of us much about. It is quite remarkable how the radwaste community—from contractors, to regulators, to universities, to local stakeholders—works together to tackle some pretty complex and challenging cleanup missions.

Radwaste people also are well aware of the benefits of collaboration. This is particularly exemplified in several articles in this issue of *Radwaste Solutions*, including "Savannah River's Silver Lining" (page 28), which shows how Department of Energy contractor Savannah River Nuclear Solutions is collaborating with Savannah River National Laboratory to find affordable but effective methods of cleaning up groundwater contamination at the South Carolina site.

We also have an article beginning on page 20 on a collaborative effort between the University of North Carolina at Charlotte and Orano Federal Services to design a system for removing trapped mercury, as well as a piece by JoAnne Castagna (page 58) on how the U.S. Army Corps of Engineers has worked with the DOE and contractors Olgoonik Development and ICC Commonwealth to take down a 320-foot exhaust stack at New York's Brookhaven National Laboratory.

In addition, a recent piece of news is worth noting, as I feel it typifies the value of the three Cs (that's community, collaboration, and compromise—not cesium). I'm referring to the July 21 announcement by Reps. Mike Levin (D., Calif.) and Rodney Davis (R., Ill.) on the formation of a bipartisan House spent nuclear fuel caucus (see page 19 for more). The laudable goal of the caucus is to make headway on the spent fuel issue, whether or not its members have a preferred solution. While, granted, it would be better to have concrete action on spent fuel management, it is encouraging to see a community of leaders from both parties collaborate on the issue, and maybe even find some compromise. And I'll end on that hopeful note.

Tim Gregoire, editor-in-chief

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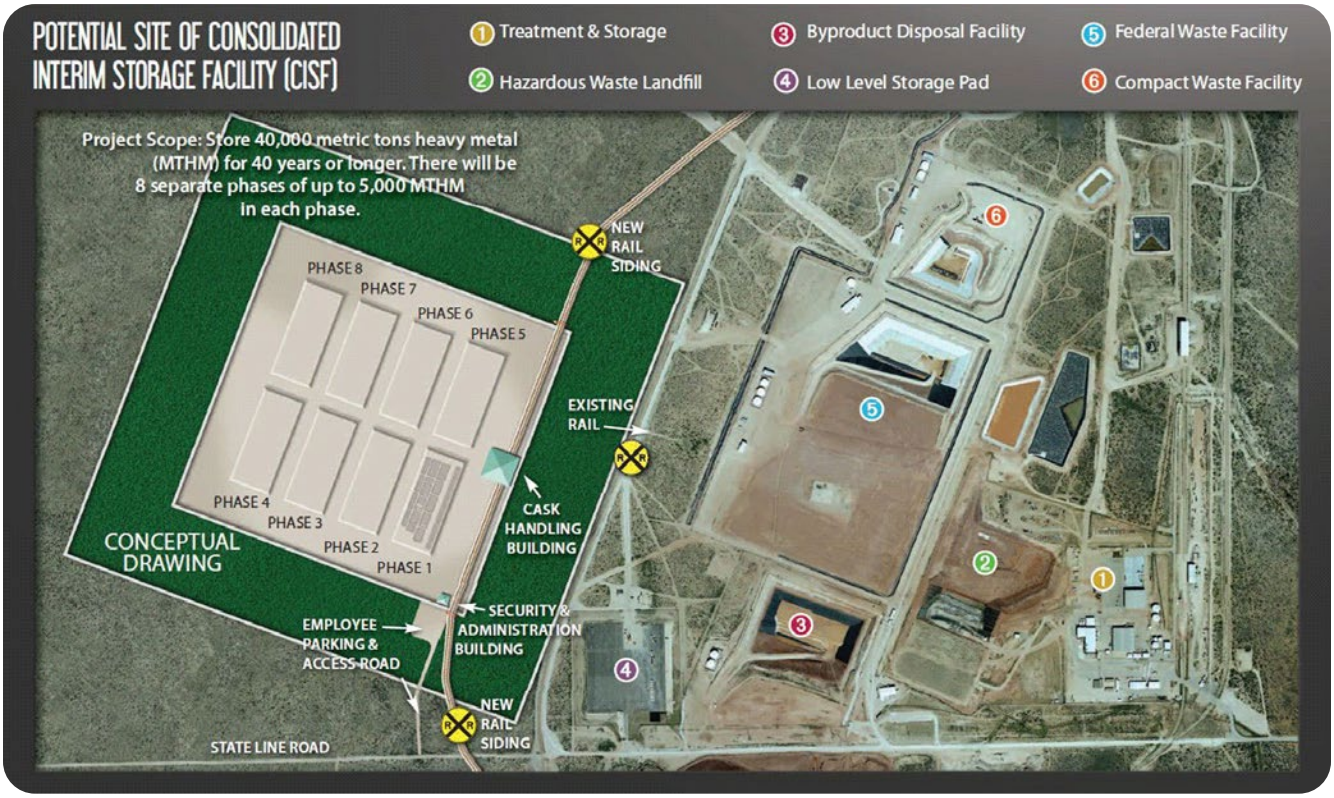

NRC releases final EIS for Texas spent fuel storage facility

Above: ISP's proposed interim storage site for commercial spent nuclear fuel. (Image: NRC)

The Nuclear Regulatory Commission has issued its final environmental impact statement on an application by Interim Storage Partners for a license to construct and operate a consolidated interim storage facility for spent nuclear fuel in Andrews County, Texas. After considering the environmental impacts of the proposed action, the NRC announced on July 29 that its staff has recommended granting the proposed license.

Interim Storage Partners is a joint venture of Waste Control Specialists and Orano CIS, a subsidiary of Orano USA. If granted, the license would authorize ISP to construct a facility to store up to 5,000 metric tons of spent commercial nuclear fuel, as well as greater-than-Class C waste, for a period of 40 years. ISP plans to expand the facility to a total capacity of 40,000 metric tons of spent fuel. The facility would be built adjacent to Waste Control Specialists' low-level radioactive waste disposal facility.

The NRC published a draft EIS on the project in May 2020. Agency staff held four public meetings by webinar to present the draft findings and receive public comments. They received and evaluated about 2,500 unique comments submitted by nearly 10,600 members of the public.

The NRC will provide the final EIS to the Environmental Protection Agency for filing. Once the EPA publishes in the *Federal Register* a notice that it has received the document, the NRC must wait at least 30 days before issuing a licensing decision. When it announces its licensing decision, the NRC will also publish its final safety evaluation report detailing its technical review of the ISP application.

Additional information about the NRC staff's review of the ISP application is available on the NRC website at nrc.gov.

Source Points continues

Decision on Holtec CISF delayed to 2022

The Nuclear Regulatory Commission plans to complete its safety review of Holtec International's proposed HI-STORE consolidated interim storage facility by January 2022. A final licensing decision on the facility will be made in conjunction with the release of the agency's final safety evaluation report, the NRC said in a July 2 letter to Holtec.

The NRC has also revised its schedule for completing its environmental review, with a final environmental impact statement to be published by November of this year. The agency had previously said that the final EIS would be released by July.

In 2017, Holtec submitted to the NRC an application for a license to build and operate an interim storage facility for spent nuclear fuel and greater-than-Class C waste in Lea County, N.M. The license application seeks NRC approval to store up to 8,680 metric tons of spent fuel for a 40-year license term.

The NRC said the delay in completing its environmental and safety reviews of Holtec's application is the result of the time the agency staff needs to process requests made to Holtec for additional information regarding the application. Holtec indicated that it would respond by August 30 to the staff's latest request for additional information (RAI), issued on May 20.

The NRC staff's current schedule for completing its review is dependent on Holtec's responses to its RAIs.

"The staff's schedule assumes that Holtec will provide timely and high-quality responses to all outstanding RAIs, and that no follow-up RAIs will be necessary," the NRC letter states. "If additional RAIs are necessary, the staff will appropriately consider whether to further delay its schedule or to suspend its review."

DECOMMISSIONING

EnergySolutions to decommission Kewaunee power plant

Utah-based EnergySolutions has entered into a definitive agreement with Dominion Energy to acquire the closed Kewaunee nuclear power plant for prompt decommissioning. Located about 30 miles southeast of Green Bay, Wis., the single-unit, 574-MWe pressurized water reactor was shut down in May 2013 for financial reasons.

EnergySolutions will acquire Kewaunee for decommissioning. (Photo: Dominion Generation)

Dominion completed the transfer of Kewaunee's used fuel to dry storage in June 2017. The remaining decommissioning work, to be executed by EnergySolutions, will result in the complete dismantlement of the facility and the removal of all radioactive waste.

Beginning the plant's decommissioning now will accelerate its completion and allow the property to be considered for reuse ahead of Dominion's original decommissioning schedule, EnergySolutions said. Dominion initially selected the Nuclear Regulatory Commission's SAFSTOR method of decommissioning, with the reactor to be maintained in a safe and stable condition for up to 60 years before decommissioning is completed.

"We appreciate the confidence Dominion Energy has in our company by entering into this contract," said Ken Robuck, president and chief executive officer of EnergySolutions. "This project will fit nicely within our decommissioning project portfolio, and we are looking forward to applying our industry-leading decommissioning and waste management experience to this project."

EnergySolutions' other current decommissioning projects include the historic Three Mile Island-2 in Pennsylvania, the San Onofre Nuclear Generating Station in Southern California, and the Fort Calhoun nuclear power plant in Nebraska.

Source Points continues

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Decommissioning of Fort Greely's SM-1A to begin in 2022

The U.S. Army Corps of Engineers is set to begin decommissioning SM-1A, the mothballed nuclear power reactor at Fort Greely, in Alaska, beginning next year, a project that is expected to take approximately six years. The USACE said it expects to release a request for proposals soliciting contractor bids for the decommissioning and dismantlement project by October.

The USACE issued a final environmental assessment and finding of no significant impact for the SM-1A decommissioning on June 28, which was officially finalized on July 28 after a 30-day waiting period. A public review period was held between February 26 and March 28, and comments received during that time are addressed in the final documents. The USACE intends to decommission the deactivated plant site to a level that will allow it to be released for unrestricted use.

Col. John Litz of the USACE examines the containment vessel door of the deactivated SM-1A reactor during a site visit in April 2019. (Photo: USACE)

SM-1A operated from 1962 to 1972 and was used as an "in-service" test facility for nuclear power in an arctic environment, supplying electrical power and heating steam for Fort Greely. The reactor design was based on the concept of the SM-1 reactor at Fort Belvoir, in Virginia, a prototype for stationary medium-power plants (SM). The "1A" moniker designates it as the first field plant of its type.

Because of SM-1A's historical significance (the plant was found eligible for listing in the National Register of Historic Places), and because decommissioning will adversely affect the property, the USACE signed a memorandum of agreement with the Alaska State Historic Preservation Office and the City of Delta Junction outlining how the history of SM-1A and its unique artic mission will be preserved.

Nuclear leaders to collaborate on CANDU D&D

A collaboration agreement signed by Ontario Power Generation's Center for Canadian Nuclear Sustainability, Canadian Nuclear Laboratories, and SNC-Lavalin will build on Ontario's nuclear industry expertise and skilled workforce to support the decontamination and decommissioning of CANDU reactors in Canada and around the world, according to a May press release from the organizations. The work will include the decommissioning of OPG's Pickering nuclear power plant following the end of commercial operations in 2025.

Canada's Pickering nuclear power plant. (Photo: OPG)

In addition to exploring the potential for international decommissioning opportunities, the collaboration is intended to drive best practices and innovation for delivering decommissioning projects in a safe, timely, and cost-effective manner. The organizations will also work to identify future workforce skill gaps and develop plans to fill any such gaps.

According to OPG, the decommissioning of Pickering will be supported by SNC-Lavalin

subsidiary Candu Energy, which has decommissioning experience in the United States and Canada. OPG said it will also leverage Canadian Nuclear Laboratories' expertise in decommissioning, packaging and storage, and environmental protection to safely dismantle and repurpose the Pickering site.

Located near Toronto on the north shore of Lake Ontario, Pickering houses six operating CANDU reactors with a total capacity of 3,094 MWe. Under OPG's proposed plan, Pickering Units 1 and 4 will be shut down in 2024, followed by Units 5 to 8 in 2025. Units 2 and 3 were shut down in 2007 and 2008, respectively.

LOS ALAMOS

Waste management at PF-4 a continuing challenge, DNFSB says

The Defense Nuclear Facility Safety Board, which provides independent federal oversight of Department of Energy weapons facilities, has reported that low-level radioactive and other combustible waste is accumulating in the basement of Los Alamos National Laboratory's Plutonium Facility 4 (PF-4), and that housekeeping and waste management in the PF-4 basement have been a continuing challenge.

The Plutonium Facility at Los Alamos National Laboratory. (Photo: LANL)

In a June 18 inspection report, the DNFSB noted that the increased pace of work to support plutonium pit production has correspondingly increased the amount of waste generated at PF-4. The DOE's National Nuclear Security Administration, which is required by Congress to have the capacity to produce 80 new plutonium pits per year by 2030, has been undertaking work to improve the equipment and capabilities of PF-4, including adding upgraded glove boxes.

According to the DNFSB report, which was made public on July 9, a board inspector found numerous plastic bags filled with garbage accumulating in the PF-4 basement. "Of note, several undated plastic bags filled with cardboard-framed air filters have been staged for the past month," the report states. "An informal marking on one bag notes that these filters have no waste acceptance form and are of questionable provenance. There is also no transient combustible permit associated with the bags."

LANL's PF-4 is the only fully operational, full capability plutonium facility in the nation. Facing problems with its criticality safety program, however, lab officials temporarily paused some work at the facility in 2013. A review of Los Alamos's safety program conducted that year by the DNFSB found that the program did not comply with DOE requirements or industry standards. The DNFSB review also identified criticality safety concerns "stemming from weaknesses in conduct of operations" at PF-4.

In June 2020, 15 workers at PF-4 were evaluated for Pu-238 exposure when a damaged glove box glove set off a continuous air monitor alarm. The glove box was due to be replaced the following day, according to the *Los Alamos Reporter*.

Most recently, a DNFSB inspector reported a spill of more than 200 gallons of water that occurred in PF-4 on July 19. The water, which spilled from a water tank during refilling, spread contamination to the floors of adjacent rooms and into the building's basement. According to the DNFSB report, dated July 23, no individuals were contaminated or injured during the event, and the impacted rooms were being dried and decontaminated.

Source Points continues

SAVANNAH RIVER SITE

DOE doubles pace to process its surplus plutonium

The Department of Energy's Office of Environmental Management has doubled the number of work shifts for employees in glove box operations at its Savannah River Site in South Carolina. The increased work pace will help the department meet its commitment to South Carolina to remove surplus plutonium from the state, the DOE said.

"Moving from two- to four-shift glove box operations increases our plutonium downblending rates through our existing glove box," said Maxwell Smith, K Area deputy operations manager for SRS management and operations contractor Savannah River Nuclear Solutions (SRNS).

A view of Savannah River's K Area Complex, where plutonium downblending operations take place. (Photo: DOE)

SRNS put together a team of 48 operators and support personnel needed to fill the four shifts and is managing a pipeline program of 10 employees to fill positions as needed from attrition, Smith said.

The DOE was legally required to remove 9.5 metric tons of plutonium from South Carolina by January 1, 2022. In September 2020, however, the DOE reached an agreement with the state, extending the deadline to 2037. The DOE required more time to remove the material after the cancellation of the Mixed Oxide Fuel Fabrication Facility in 2018 in favor of using a "dilute and dispose" method of managing the plutonium.

According to the DOE, moving to four shifts is part of a plan to increase the efficiency of Savannah River's K Area Complex. Last year, workers improved the K Area Interim Surveillance glove box, where downblending currently occurs.

Workers also recently completed construction of a storage and shipping pad for interim storage of downblended materials before they are shipped out of South Carolina for permanent disposal at the DOE's Waste Isolation Pilot Plant in New Mexico. The DOE said the first shipment is planned for March 2022.

IDAHO SITE

Jacobs-led venture awarded 10-year, $6.4 billion cleanup contract

The Department of Energy's Office of Environmental Management has awarded the Idaho Cleanup Project (ICP) contract for the Idaho National Laboratory site to Idaho Environmental Coalition (IEC), of Tullahoma, Tenn. The contract has an estimated ceiling of approximately $6.4 billion over 10 years, with cost reimbursement and fixed-price task orders to define the contract performance.

Led by engineering company Jacobs as the majority partner, IEC takes over the work done by Fluor Idaho, which has held the site cleanup contract since 2016. The IEC team also includes Idaho Falls–based North Wind Portage and small business subcontractors Navarro Research and Engineering, Oak Ridge Technologies, and Spectra Tech.

The DOE said on May 27 that the procurement was awarded under a full and open competition, with five contract proposals submitted.

The work to be performed under the new ICP contract will include the following:

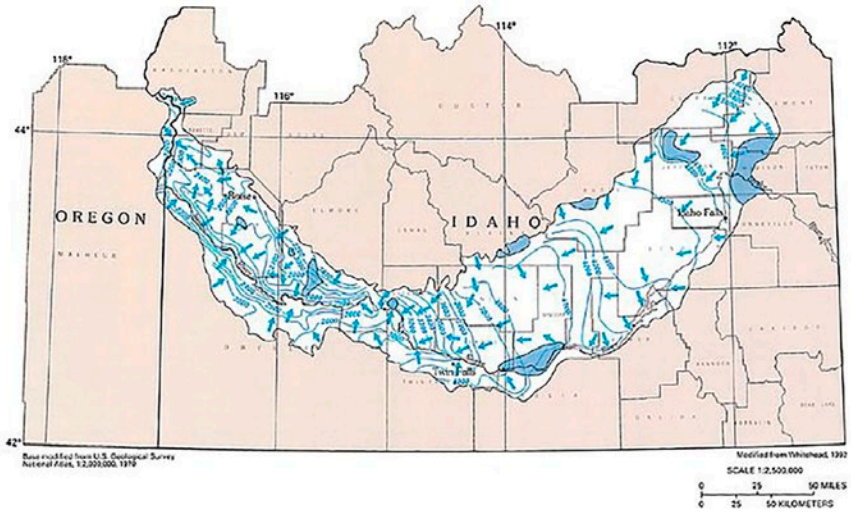
- Operations of the Integrated Waste Treatment Unit.
- Spent nuclear fuel management, including the Nuclear Regulatory Commission–licensed

Source Points continues

independent spent fuel storage installations at the INL site and Fort Saint Vrain, near Platteville, Colo.

- Transuranic and low-level radioactive waste disposition and management.
- Facility decontamination and decommissioning.
- Environmental remediation activities.
- Facility infrastructure.

"Jacobs welcomes the opportunity to partner with DOE to advance the restoration of the ICP to beneficial reuse for the INL and Idaho Falls community," said Karen Wiemelt, senior vice president of Jacobs Critical Mission Solutions, North American Nuclear. "Together with the DOE, Jacobs will use our technology-driven solutions to reduce the environmental legacy of the Cold War, support high-quality jobs in the region, and protect the Snake River Plain Aquifer, a critical element of Idaho's agricultural industry."



The Snake River Plain Aquifer.

UNITED KINGDOM

EDF reaches deal with government on decommissioning AGRs

The U.K. government and EDF have agreed to improved arrangements for the decommissioning of Britain's seven advanced gas-cooled reactor nuclear power plants, which are due to reach the end of their operational lives this decade.

Under the revised arrangements, negotiated by the government with EDF and signed in June, the AGR stations will transfer to the U.K.'s Nuclear Decommissioning Authority after EDF has ceased power generation and defueled the plants, subject to regulatory approvals. The NDA will take ownership of the plants and manage the long-term decommissioning program, with Magnox Ltd. as the new site license company.

According to the U.K. government, these arrangements will harness EDF's expertise in defueling the AGRs and NDA's experience of decommissioning nuclear plants and facilities in the United Kingdom. The NDA is currently decommissioning the U.K.'s older Magnox reactors.

EDF announced earlier in June that it was moving its Dungeness B nuclear plant in Kent into its defueling phase "with immediate effect," rather than proceeding with a restart. The company said that, in a best case, it anticipates being able to carry out some "low rate defueling" of Dungeness B in the second half of 2022.

EDF's Dungeness B nuclear power plant in Kent, England. (Photo: EDF)

Source Points continues

A deposition tunnel is excavated into bedrock at Finland's Onkalo facility. (Photo: Posiva)

FINLAND

Excavation of first repository tunnels begin at Onkalo

Posiva Oy, the company responsible for the disposal of Finland's spent nuclear fuel, announced earlier this year that it has begun excavating the first disposal tunnels at the Onkalo deep geologic repository near the Olkiluoto nuclear power plant. Posiva, which is owned by Finnish nuclear plant operators Fortum and Teollisuuden Voima, said that the start of construction is a significant milestone, as it comes after years of research and development activities on methodology for rock construction.

The Onkalo repository will be the first geologic disposal facility in the world for spent nuclear fuel when it begins disposal operations, expected in the mid-2020s. Initial construction work on Onkalo, which will be constructed at a depth of 400 to 430 meters (about 1,300 to 1,400 feet), began in 2004. The Finnish government granted Posiva a license for constructing the final disposal facility in 2015.

Posiva said that the first five tunnels, to be excavated during the next 18 months, mark the beginning of an extensive building effort. It is estimated that 100 deposition tunnels will be excavated during Onkalo's 100-year operational period, totaling a length of about 35 kilometers.

Posiva has opted for final disposal based on the KBS-3V method developed by the Swedish nuclear fuel and waste management company SKB. The method involves placing spent fuel canisters in deposition holes drilled into the repository's disposal tunnels. The copper and steel canisters will be surrounded by a bentonite clay buffer within the deposition hole. Depending on how many deposition holes there are in a tunnel, which is determined by the volume of suitable rock based on the rock fractures, about 30 canisters will be placed in one tunnel, accommodating about 65 tons of spent nuclear fuel, Posiva said.

Source Points continues

POLICY

Bipartisan House caucus to focus on stranded spent fuel issue

Hoping to drive progress on the safe storage, transportation, and disposal of spent nuclear fuel across the country, Reps. Mike Levin (D., Calif.) and Rodney Davis (R., Ill.) have formed the Spent Nuclear Fuel Solutions Caucus in the U.S. House of Representatives.

According to Levin and Davis, the Spent Nuclear Fuel Solutions Caucus seeks to address the challenges associated with stranded commercial spent fuel across the country and serve as a forum where House members can come together to make headway on the issue, regardless of whether or not they have a preferred solution.

In announcing the formation of the caucus on July 21, Levin and Davis said that the current system of spent nuclear fuel storage is not sustainable, particularly for sites that no longer have operating reactors and could be redeveloped for other beneficial uses. They added that it is also a violation of the promise, codified by law, that the federal government would take title to the waste in return for ratepayers' contributions to the Nuclear Waste Fund.

Levin

Davis

Other members of the Spent Nuclear Fuel Solutions Caucus include Reps. Sara Jacobs (D., Calif.), Michelle Steel (R., Calif.), Scott Peters (D., Calif.), Jared Huffman (D., Calif.), Chellie Pingree (D., Maine), Salud Carbajal (D., Calif.), Mondaire Jones (D., N.Y.), and Suzanne Bonamici (D., Ore.).

Granholm urged to form nuclear waste management office within DOE

The American Nuclear Society joined seven other prominent nuclear organizations in submitting a letter to Energy Secretary Jennifer Granholm requesting that the Department of Energy establish an office dedicated to developing and managing an integrated nuclear waste storage, transportation, and disposal program.

Specifically, the office would provide a focal point for work on spent nuclear fuel and high-level radioactive waste; facilitate necessary engagement with external stakeholders; and demonstrate an intent and commitment to take meaningful action.

"We urge you to take this action immediately, particularly given the funding recently provided by Congress under the Consolidated Appropriations Act of 2021," the letter states. The letter also asks that the new office report directly to the energy secretary.

Granholm

Joining ANS executive director and chief executive officer Craig Piercy in signing the May 3 letter to Granholm were Maria Korsnick, president and CEO of the Nuclear Energy Institute; Bud Albright, president and CEO of the United States Nuclear Industry Council; Paul Kjellander, president of the National Association of Regulatory Commissioners; Katie Sieben, chair of the Nuclear Waste Strategy Coalition; Wayne Norton, steering committee chair for the Decommissioning Plant Coalition; Ron Woody, executive board chair of the Energy Communities Alliance; and Charles Fairhurst, member of the Science Panel of the Sustainable Fuel Cycle Task Force.

Fine-Tuning a Mercury Washing Machine

Researchers with UNC Charlotte and Orano test an oxalic acid dissolution system for removing elemental mercury trapped in corroded pipes and components.

By Michael Smith, Sven Bader, Thomas Koch, Arthur Niemoller, and Andrew Straight

Several Department of Energy sites anticipate the need for recovery and cleanup of mercury-contaminated soils and facilities, where mercury was used as a key element in the nuclear enrichment process [1]. Because mercury is an extremely toxic element that presents a health hazard [2], its recovery and cleanup are vital to the site's environmental restoration. One such site that used large amounts of mercury is the lithium enrichment facility at the Y-12 National Security Complex in Oak Ridge, Tenn. [1].

Various methods have been investigated to recover mercury from contaminated soil, such as a mercury treatment process currently implemented in France to clean up sandy soil sites [3]. Previous work [4, 5, 6] has proposed modified processes for use at sites with clayey soil, such as Oak Ridge [1].

Another, newly patented, process uses alkaline chemicals to isolate and capture elemental mercury without the acidic corrosion of contaminated components [7]. Oxalic acid is an organic compound found in common household cleaning products; its conjugate base, oxalate, is a chelating agent for most industrial metal cations. The nuclear industry has significant experience applying oxalic acid to tanks, piping, and heat exchangers to remove metallic scales, which can trap a significant amount of volatile elemental mercury.

Removing the metallic scales using oxalic acid allows the majority of the trapped mercury to flow freely. The acid is then destroyed, and the captured metals, including a significant portion of the mercury, are recovered. An attractive aspect of this process is that once the metals have been removed, the diluent (water) can be reused, limiting secondary waste streams.

The University of North Carolina at Charlotte, in collaboration with Orano Federal Services, performed a preliminary evaluation of an optimized method of removing corrosion and scales using an oxalic acid dissolution system. The proposed process was evaluated by varying multiple process steps using representative piping samples for testing [8]. The objectives of this study were to (a) design and (b) test a scaled proof-of-concept oxalic acid dissolution system for the application of removing corrosion and scales from mercury recovery process piping and components.

Continued

OXALIC ACID DISSOLUTION SYSTEM OVERVIEW

During the lifetime of a nuclear facility, piping and components can develop a layer of corrosion and metallic scales. The dominant metallic constituents of these residues are usually iron and aluminum, with smaller concentrations of calcium, manganese, and nickel. In some instances, while recovery of these metals is desirable, the prime objective of removing these scales is to allow recovery of hazardous metallic and elemental mercury trapped underneath. The purpose of this project was to design and build a system capable of removing and recovering the corrosion and contaminants using oxalic acid from the applicable decommissioned process piping.

The system was also tasked with demonstrating oxalic acid destruction. A combination of an oxalic acid and water mixture, ultrasonic agitation, and heat were used to clean the pipes. Ultraviolet light, hydrogen peroxide, and ozone were used to destroy the acid. Figure 1 shows an overview of the acid dissolution process [8].

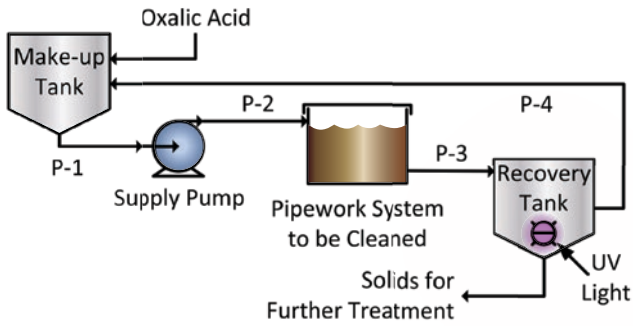


Fig. 1. Oxalic acid dissolution process schematic.

Specification and Requirements

The system design fits into a 3-foot by 4-foot space for ease of operation and placement into tight areas. For consistency and repeatability during testing, the testing samples consist of corroded metal pipes cut into 4-inch segments. The effect of the oxalic acid concentration is measured by testing different levels of concentrations of acid, up to 9 percent.

To optimize the removal of residue from corroded pipes, the system design includes (a) a makeup tank, where the oxalic acid and water are combined, (b) a cleaning tank where the corroded piping is cleaned, (c) a recovery tank where the oxalic acid is destroyed and any debris is captured, and (d) a pump that circulates the water mixture throughout the system and transfers the products between tanks. Recirculation requirements for improved scale removal are also considered.

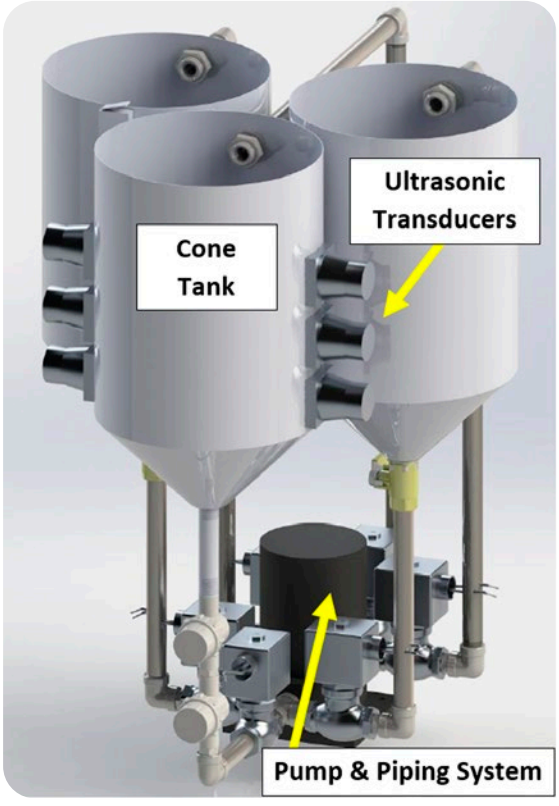
This work also investigates and identifies optimal values for the acid concentration and temperature, agitation method, cleaning time, and destruction method (UV light, hydrogen peroxide, or ozone).

System Design

The proposed overall system design and constructed system are presented in Fig. 2 [8]. The oxalic acid and water mixture are created in the makeup tank, and the mixture then flows into the cleaning tank, where much like a dishwasher, the pipes are cleaned via agitation, recirculation, and heat (which were varied during testing).

Ultrasonic transducers provide agitation while an immersion heater heats the mixture to the desired temperature. Filters placed downstream of the cleaning tank capture the debris and contaminants before they reach the pump. After the cleaning and filtering processes, the mixture enters the recovery tank, where the oxalic acid is destroyed. The products are clean water, which is recycled to the makeup tank for reuse, carbon dioxide off-gases released to the environment, and the disassociated metals collected from the bottom of the recovery tank or on filters downstream. Pipes connect the tanks, and a centrifugal pump is used to deliver the mixture throughout the system. Solenoid valves control the flow of the mixture.

Fig. 2. Overall oxalic acid dissolution system design (left) and constructed system (right).



A sample pipe held within the cleaning tank.

The centrifugal pump, which can accommodate a maximum particle size up to 3/32 in., provides resilience against particles and cavitation. The pump delivers a flow rate of 10 gallons per minute using 1/8 horsepower. To provide control of the pump speed (for flow control), the pump is powered with a variable-frequency drive (VFD).

In concert with the pump, five solenoid valves direct the water flow between the different tanks through 1/4-in. NPT stainless steel piping and connections. The flow characteristic equation used for sizing the system is shown in (1).

$$N_{Re} = \frac{u \cdot D}{v} \qquad (1)$$

This was used to determine if the flow would be laminar or turbulent, so that the system could be appropriately designed.

The variables are defined as follows: N_{Re} = Reynolds number (dimensionless), u = average flow velocity (m/s), D = pipe diameter (m), and v = kinematic viscosity (m^2/s). An $N_{Re} < 2{,}000$ indicates laminar flow, whereas an $N_{Re} > 4{,}000$ represents turbulent flow.

For $\boldsymbol{u}$ = 1.992–19.92 m/s, D = 1/4-in. inside pipe diameter, and v = 1.004×10-6 m^2/s (for water at 20°C), the resulting $N_{Re} \geq 1.26{\times}104 > 4{,}000$, which means the flow is turbulent. Turbulent flow provides improved mixing and energy transfer compared with laminar flow. Therefore, the design is acceptable for this application.

The mixing, cleaning, and recovery tanks each hold 4 gallons and are uniform in design, consisting of a conical tank geometry fabricated from welded stainless steel. The mixing tank is used to mix the oxalic acid solution to the desired concentration via manually performed mechanical stirring. This tank's design includes penetrations (1/4-in. NPT pipe fitting) near the top to allow flow (recirculation) into the tank and at the bottom for draining. A two-way valve at the bottom supports draining and helps prevent backflow into the tank after it is drained.

The cleaning tank uses six ultrasonic transducers (60 W, 40 kHz each). The ultrasonic transducers are attached to the cleaning tank via aluminum brackets (see photo on page 25). The task of the recovery tank is to destroy the oxalic acid after the cleaning process via a UV lamp, H_2O_2, or O_3. The UV light is secured to the lid via a fixture that is fabricated from high-density polyethylene. The design includes a safety switch to ensure the lid is closed as a permissive for the submerged UV lamp to operate.

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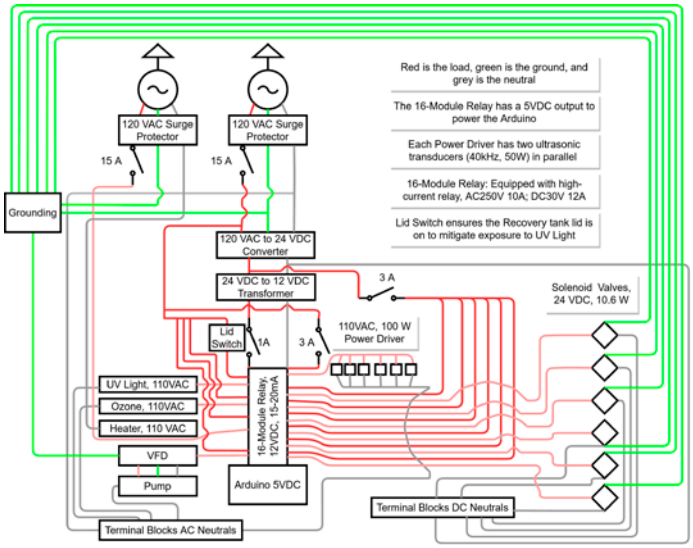
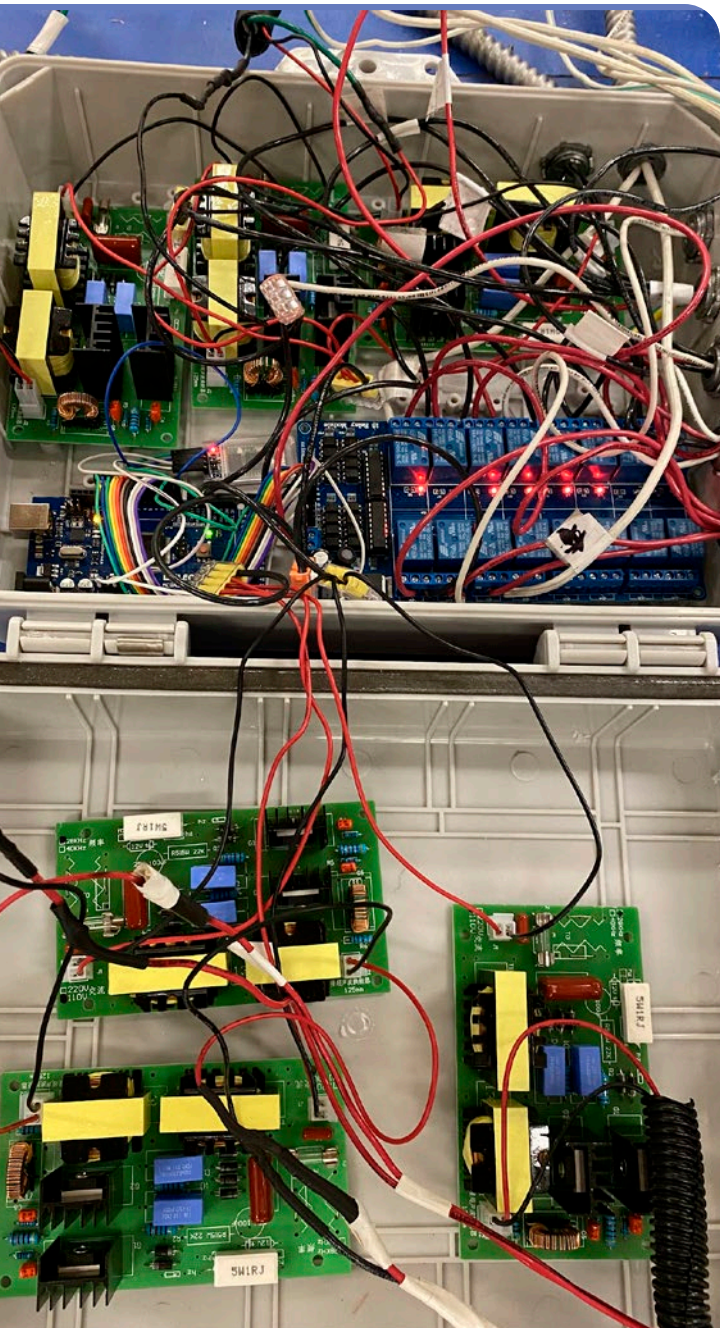


Fig. 3. Electrical circuit schematic. (Above)

Fig. 4. Electrical control panel. (Below)



The electrical circuit schematic for the system is shown in Fig. 3 and includes: a centrifugal pump (240 VAC, three-phase power), a 1/4-hp VFD to control the pump speed (120 VAC, 15 Amp), six solenoid valves to control flow (24 VDC, 10.6 W), six ultrasonic transducers used for agitation (120 VAC, 60 W, 40 kHz), an immersion heater for temperature control (120 VAC, 1,500 W), an ozone machine and UV light with a safety switch (120 VAC). The electrical control panel is shown in Fig. 4, where the electrical components are mounted on a DIN rail within the enclosure.

To control the system, a 16-relay module is used with a microcontroller (Arduino Mega), where each relay serves to open or close a component's circuit to turn it off or on. The microcontroller is remotely controlled via a Bluetooth module. The relays, microcontroller, Bluetooth module, and power drivers are housed in a separate electrical enclosure (not displayed) for protection.

To support remote system operation, a software-based user interface (UI) controls the microcontroller and relays. The UI for this controller, developed using the C# Windows Form Application in Visual Studio, is displayed in Fig. 5. This UI permits the operator to check on the status and run the system (e.g., open or close a valve). This permits operation in both manual and automatic modes, where a programmed event sequence is performed.

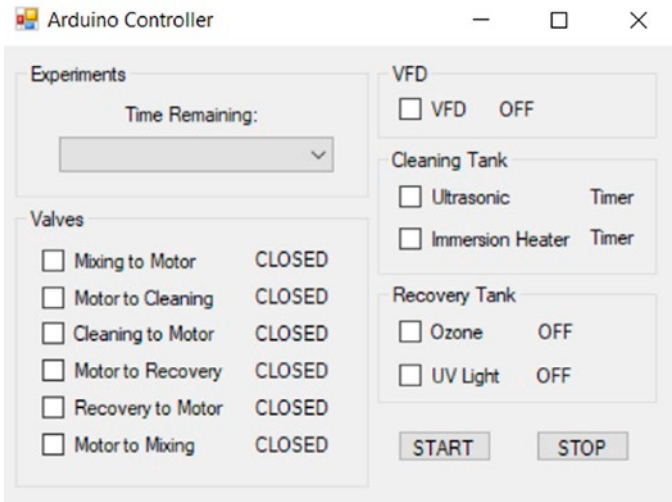


Fig. 5. Controller user interface (Arduino and relays).

FACTOR	LEVELS			
Cleaning time (minutes)	30	45	60	90
Oxalic acid concentration (%)	3	6	9	
Temperature (°C)	20	40	60	
Agitation: ultrasonic transducers	ON	—	OFF	

Table 1. Test factor and levels.

EXPERIMENTAL TESTS AND RESULTS

A standard test sequence was used to evaluate the proposed process: (a) weigh the sample pipe before cleaning, (b) perform cleaning based on the test plan specifications, (c) weigh the dried sample after cleaning, (d) destroy the oxalic acid mixture per the method in the test procedure, and (e) record the final pH and time required to destroy the acid.

The test factors and levels used for testing are provided in Table 1. A total of 20 separate test cases were performed, considering the different parameter configurations, to identify optimal process values. In choosing the different parameters, we wanted to know if the process was very sensitive to the values chosen, if there was an ideal range that would yield consistent results, or if there were certain parameters where the value chosen bears little impact on the process.

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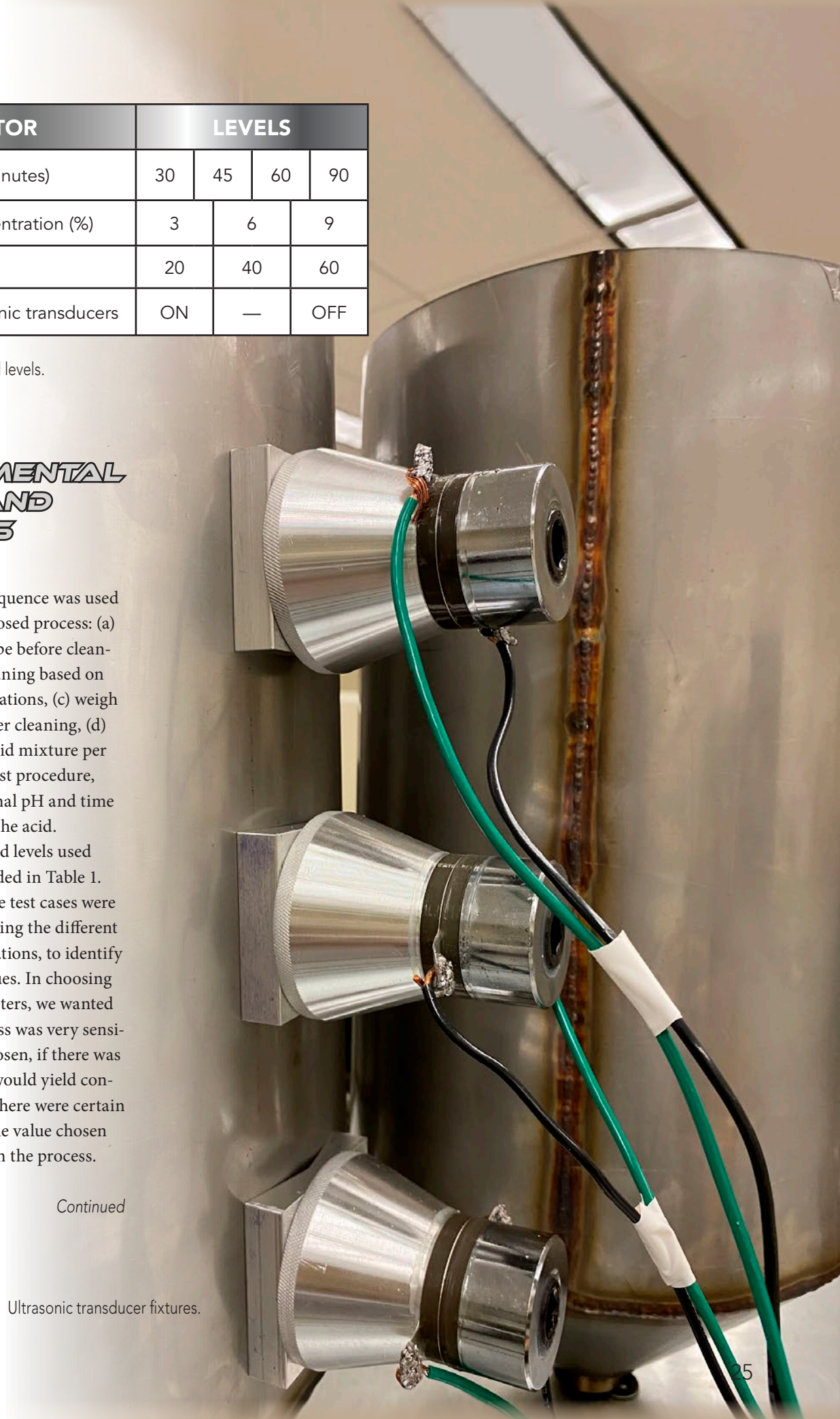


Ultrasonic transducer fixtures.

Fig. 6. Pipe sample before (left) and after (right) process.

Figure 6 shows an example pipe sample before and after cleaning. The process was successful in cleaning the pipe, as evidenced from the reduced mass shown in Fig. 7. Influential factors for cleaning efficiency include the concentration of oxalic acid used in the cleaning mixture, the cleaning mixture temperature, and whether agitation was used (see Fig. 8). Per the test results, for optimal performance, a cleaning time of 30 minutes was used with a 9 percent oxalic acid concentration, agitation turned on, and a temperature of 40–60°C.

With this testing, the oxalic acid solution had a pH of 2, with a goal of achieving an end pH of 7 via H_2O_2, O_3, or UV light. Unfortunately, these methods were not successful in achieving this goal with the current design. Possible reasons include an insufficient H_2O_2 concentration, a malfunctioning O_3 generator, and low UV light intensity. For future work, an industrial-size O_3 generator and a higher intensity UV light are suggested for capture and analysis of recovered metals.

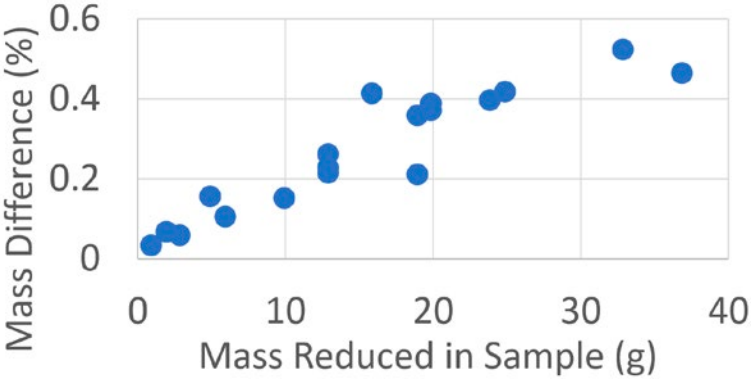


Fig. 7. Mass difference for each test case after cleaning.

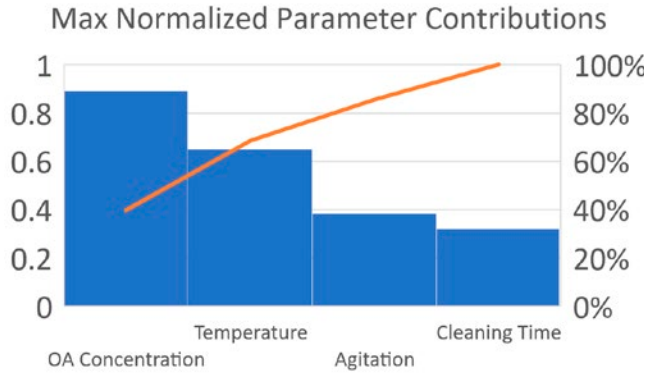
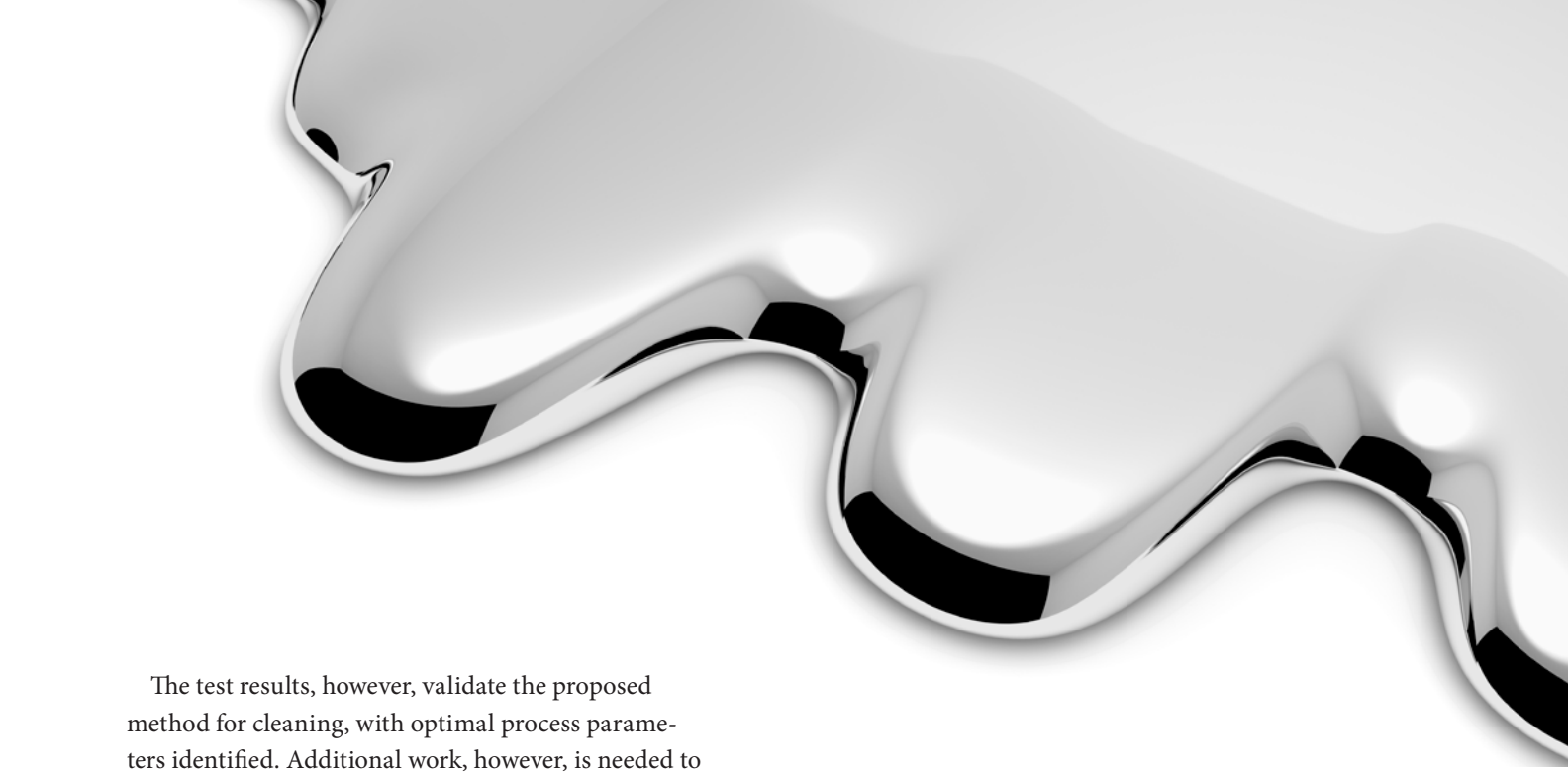


Fig. 8. Pareto chart of cleaning standardized effects.



The test results, however, validate the proposed method for cleaning, with optimal process parameters identified. Additional work, however, is needed to achieve the target pH values after cleaning to destroy the oxalic acid solution.

Michael Smith is assistant professor, Engineering Technology and Construction Management, at UNC Charlotte; Sven Bader is technical consultant, Technical Development Division, at Orano Federal Services; Thomas Koch is teaching associate professor, Mechanical Engineering and Engineering Science, at UNC Charlotte; Arthur Niemoller is manager of research collaborations at Orano; and Andrew Straight is a member of the UNC Charlotte ORANO_ACID Senior Design Team.

ACKNOWLEDGEMENTS

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This article is based on a paper presented at the 2021 ANS Virtual Annual Meeting, held June 14–16 (Transactions of the American Nuclear Society, Vol. 124, 116–119 (June 2021)).

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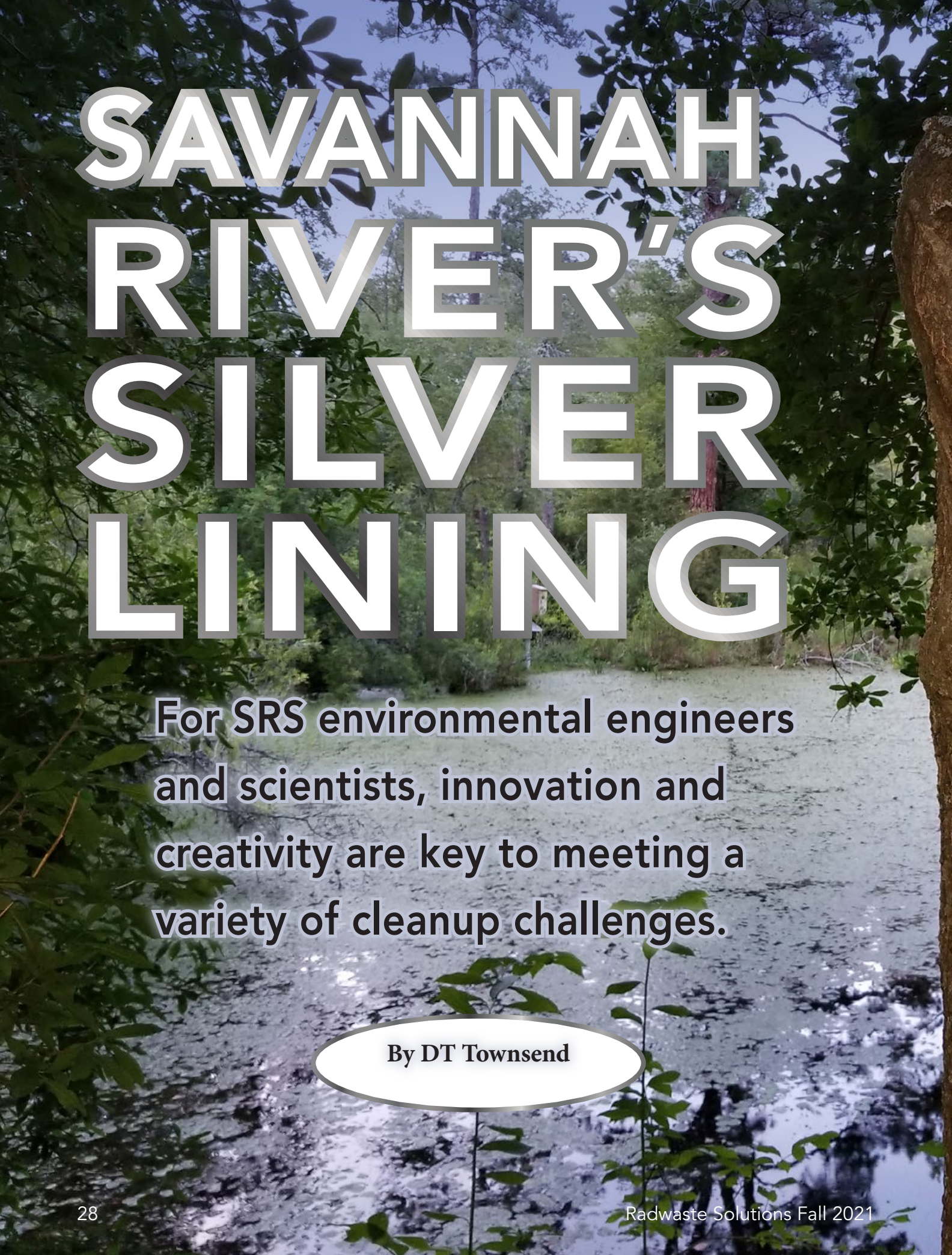

SAVANNAH RIVER'S SILVER LINING

For SRS environmental engineers and scientists, innovation and creativity are key to meeting a variety of cleanup challenges.

By DT Townsend

Nature reclaims a no trespassing sign along a walking trail at the Savannah River Ecology Laboratory. (Photo: DOE/Sean Poppy)

Since being awarded the operations and management contract at the Department of Energy's Savannah River Site in 2008, a primary goal for Savannah River Nuclear Solutions (SRNS) has been the safe cleanup and restoration of a landscape environmentally impacted by nuclear waste generated during the Cold War.

Though decades of nuclear weapons production at SRS helped defeat the Soviet Union and win freedom for several nations in Eastern Europe, there were some negative consequences. These include the accumulation of over 30 million gallons of highly radioactive liquid waste; areas across the DOE site with groundwater contaminated by chemicals; and, in some instances, radioactive materials left over from Cold War operations.

According to Chris Bergren, SRNS director of Environmental Compliance and Area Completion Projects, SRNS has a strong cleanup history based on close interaction with regulators and other stakeholders, utilizing a "core team" approach for decisions.

"The variety and number of cleanup challenges found across the 300-square-mile Savannah River Site has made our end goal that much more complex," said Bergren. "We've taken down more than 50 buildings; grouted several contaminated structures with a cement-like material, including two nuclear reactors; cleaned up earthen pits formerly holding contaminated items; remediated and closed pond-like basins containing hazardous materials; and found highly effective ways to remediate contaminated groundwater. The list goes on and so does our company's success with each task."

Bergren credits much of this success to the innovation, creativity, and dedication of those in his organization and the numerous contributions made by the Savannah River National Laboratory's engineers and scientists.

SRNL geologist Mark Amidon (left) and geochemist Hansell Gonzalez-Raymat discuss the progress of a project to immobilize iodine-129 in the groundwater and soil at the Savannah River Site while collecting soil samples. (Photos courtesy of DOE)

A SILVER SOLUTION TO GROUNDWATER CONTAMINATION

Some of the world's best solutions are often simple in concept. The first light bulb, the assembly line, sticky notes and Velcro fasteners are classic examples. Some of SRNS' toughest environmental cleanup challenges were surprisingly simple to solve through employee ingenuity.

Using such creativity, SRNS workers found that, using wells, they could inject silver chloride below the earth's surface, thereby immobilizing much of the radioactive iodine-129 found in soil and groundwater near the center of SRS.

"Since 2019, silver chloride, a conventional industrial product, has been injected into soil and groundwater to capture and lock into place a high percentage of the iodine nuclides, significantly reducing the amount of contamination in the groundwater," SRNS Area Cleanup Projects Engineer Jeff Thibault said.

This pioneering environmental cleanup technology, developed by SRNS, avoids waste and requires no power. Moreover, post-treatment testing found levels to be much lower than regulatory limits.

Ultra-fine particles of silver chloride are specially milled by an off-site vendor to create highly irregular edges, which greatly increase the surface area of the particles. The material is mixed with water and injected into the water table 30 to 60 feet below the surface. To date, workers have injected a total of 240,000 gallons of water and 165 gallons of silver chloride.

Extensive studies confirm that injecting silver chloride beneath a portion of the site has reduced levels of I-129 found in SRS groundwater up to 50 percent during pilot program field tests.

At SRS, I-129 was created as a byproduct during Cold War–era production of plutonium and tritium. Working with SRNL scientists, SRNS strives to limit the remaining radioactive isotope from moving into nearby wetlands.

"The current treatment relies on silver chloride and soil to work together to bind the iodine to subsurface, mud-like sediment, prior to it reaching the wetlands," Thibault said. "Once this plume of contaminants fully enters the marsh, treatment—much less immobilization—of the iodine, becomes much more difficult. There's little or no sediment. We're now working mostly with organic material and the water of the marsh."

SRNL geochemist Hansell Gonzalez-Raymat said that workers have completed shallow drilling for soil samples in the affected wetlands.

"The data collected from the samples will help us to determine how the iodine will interact with the organic matter and surface water found within SRS wetlands. This research will lead to future improvements to existing treatment technologies that can be submitted to the South Carolina Department of Health and Environmental Control [SCDHEC] for approval," Gonzalez-Raymat said. "This is part of a larger project within the site's F Area that is partially funded by the Department of Energy's Environmental Management Office of Technology Development."

Thibault said SRNS is working to make this project passive, requiring minimal maintenance and use of little to no electrical energy.

"We are looking at the possible use of silver chloride, along with other cleanup technologies, to continue the level of success we've experienced in the past. We are confident we'll protect our wetlands," he said.

SRNS mechanic Curtis Williford helps remove the cover of an industrial wastewater tank within a containment pit at the Savannah River Site. Employees test the area for potential health hazards prior to pumping silver-bearing sludge from the tank.

FACTOID: From 1954 to 1984, the Savannah River Site's P Reactor produced tritium and plutonium in support of the nation's Cold War nuclear deterrent.

Solvents used at that reactor and other waste sites across SRS seeped into the subsurface over time, contaminating the aquifer.

(Photo: DOE-SR)

FACTOID: German chemist Johann Schulze (1687–1744) is credited with laying the foundation for photography.

He found that mixing silver, chalk, and nitric acid would form a solution that becomes black in color when exposed to light.

(Image: Wikimedia Commons)

SLUDGE AT SRS YIELDS PRECIOUS METAL

SRNS also played an essential role in the successful removal of sludge containing silver from an industrial wastewater tank at SRS.

The silver-bearing sludge from SRS was shipped to the DOE Business Center for Precious Metals Sales and Recovery to be reclaimed, with proceeds going to the U.S. Treasury. Precious metals reclamation is the recycling and recovery of elements such as gold, silver, platinum, and palladium from hazardous waste.

For many years, workers at SRS developed photo film using a process that generated industrial wastewater containing silver nitrate. The wastewater passed through ion-exchange equipment to remove the silver before being discharged into a long-term storage vessel.

"Some of the precious metal still made it to the tank and, over the years, had accumulated to a significant amount," said Ted Millings, with the Environmental Compliance Division at SRNS. "Fast-forward to the age of digital photography. Now this tank that's regulated through the South Carolina Department of Health and Environmental Control no longer serves a purpose."

Millings said appropriate safety measures were followed during removal of the tank sludge. After workers emptied the contents of the tank and cleaned it, a camera was lowered into the vessel to verify that no sludge remained and that the floor and walls of the tank remained intact.

"It was at this point that we filled the tank with grout," said Andrew MacMillan, project lead for SRNS Area Completion Projects. MacMillan noted that the sludge removal project allowed SRS to avoid the cost of managing and disposing of the sludge as hazardous waste.

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A special vacuum-equipped truck removes water from an SRS waste tank, exposing a layer of sludge containing silver to be processed and delivered to the U.S. Precious Metals Repository.

"Helping to ensure the proceeds from the reclaimed precious metal goes to the U.S. Treasury is important; however, protecting our environment from this waste is invaluable," MacMillan said.

The DOE Savannah River Operations Office (DOE-SR) and SRNS worked closely with SCDHEC officials to ensure all state environmental regulations were followed during the project.

"Although it's the end of an era at SRS for developing photographic film, the successful completion of this project validates the continued value of teamwork and shared resources for a common cause," said Travis Shaw, SRNS environmental compliance authority for Asset Management and Distribution operations.

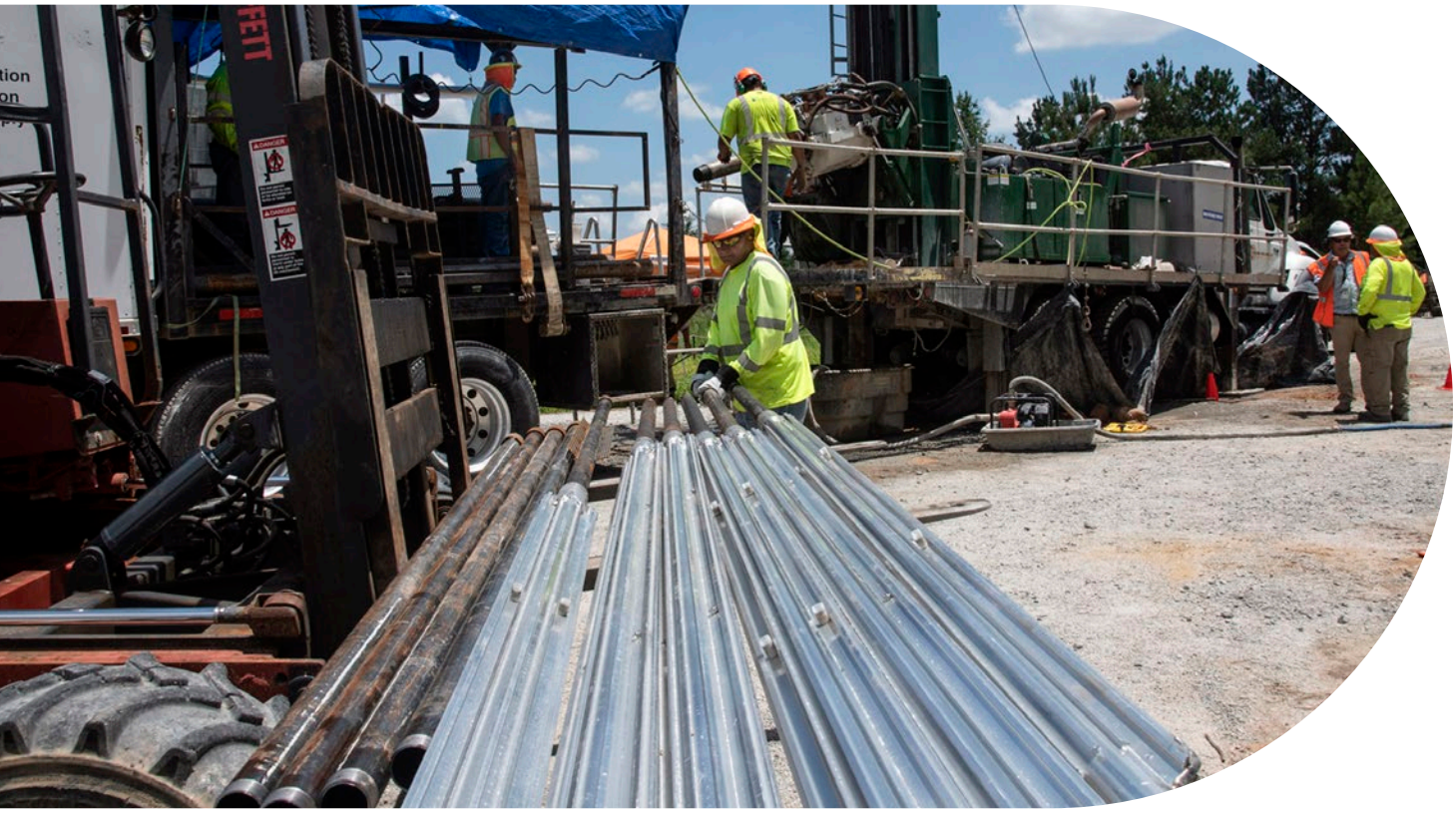
IRONING OUT CHEMICAL CONTAMINATION

SRNS recently used recycled iron filings to construct a large underground, water-permeable wall. Though not a precious metal, the filings naturally neutralize Cold War–era chemical solvents found in the aquifer beneath SRS. The solvents are much like those used in dry cleaning.

Three basketball courts in length and, on average, about four inches thick, the wall extends 135 feet below the earth's surface at its deepest point and acts like an enormous water filter.

"The contaminated water cascades down through the filings, significantly increasing the amount of contact with the iron. The interaction with the iron breaks down the structure of the contaminants, becoming harmless," said Philip Prater, senior physical scientist with DOE-SR. "This system is designed to work for decades with little maintenance, as it has in other parts of the country."

According to Prater, the remedial technology being deployed is innovative because it does not involve the use of a trench, and it can be installed at greater depths than permeable reactive barriers built at the site in the past. This technology also allows for precision placement, enabling SRS to intercept the contaminated groundwater plume in a narrow zone as it travels along an old subsurface streambed.



Injecting material containing iron filings into wells at Savannah River is a multistep process. Using 22 wells, workers created a wall three basketball courts in length, about four inches thick, and extending 135 feet below the earth's surface at its deepest point. The porous wall neutralized degreasing solvents, like those found at dry-cleaning stores, as groundwater passed through.

SRNS workers mixed more than 1.5 million pounds of iron filings with a food-grade, starch-like material, shown here.

To create the wall, SRNS subcontractors mixed large amounts of a food-grade, starch-like material with 1.5 million pounds of iron filings, which are ground-up iron parts from reclaimed automobile engines. The workers then injected the material into 22 wells, 12 feet apart, within the aquifer. The high-pressure injection creates fractures in the subsurface sediment, creating space to be filled by the mixture.

"Incredibly, the weight of this reactive permeable wall is equal to approximately 500 Toyota Prius vehicles," said Mark Amidon, a geologist with SRNL. "This environmental cleanup system is designed to work passively with only routine monitoring."

Prater noted that workers completed the iron injections safely and ahead of schedule.

"SRNS personnel were able to recognize early on and take advantage of cooler air temperatures. The cooler weather greatly improved the volume of iron injected each day," he said. "Further, they ensured excess iron was distributed where groundwater contaminant levels were the highest, which provided improved remedial effectiveness."

"This highly efficient environmental cleanup technology is another asset within the arsenal of environmental restoration tools assembled for use across SRS," said Amidon. "It's an 'environmental war' on hazardous waste, and we're winning it." ⊠

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Three Studies in Site Remediation

Having completed three separate decommissioning projects, EnergySolutions takes the final steps in restoring the sites to a natural state.

By Jeremy Kartchner

For any nuclear power plant that has been permanently shut down, site restoration is the ultimate decommissioning goal when contracting with a utility to demolish a facility. The task, however, is not as simple as mobilizing heavy equipment and waving a wrecking ball or planting explosives to implode the facility, then loading up the debris and sending it to a landfill.

There is a real science and engineering approach necessary to safely restore the land to its original state. That has been the goal for EnergySolutions over the past decade as the company works to safely decommission shuttered nuclear power plants—packaging, transporting, and disposing of the waste, and restoring the sites for whatever reuse the owners and host communities see fit.

Continued

ZION

In 2010, EnergySolutions signed a contract with Exelon Corporation for the first license transfer of the Zion nuclear power station, located 45 miles north of Chicago on the banks of Lake Michigan, for the sole purpose of decommissioning the facility and restoring the land to its natural state.

The fixed-price contract was estimated to take 10 years to complete. To date, the company has fulfilled the contract and is awaiting approval from the Nuclear Regulatory Commission for a license transfer back to Exelon. All that remains on-site, per federal regulations, is the independent spent fuel storage facility (ISFSI) and an active ComEd switchyard, which still services the ComEd transmission and distribution system.

Safety is always a priority at every decommissioning project, and the Zion project exceeded safety standards during the life of the project. One of the goals during any decommissioning project should be to recycle as much material as possible. This includes recovering high-grade steel and copper wiring. To accomplish this goal at Zion, EnergySolutions outsourced as much of the work as possible with local vendors. And if there was nonradioactive material that needed to be taken to a landfill, the company contracted with local landfills in the area to transport and dispose of that waste.

One of the more interesting surprises during the project was the discovery of a large snake hibernaculum while refurbishing the site's rail system. The challenge was to safely relocate the 82 snakes from several species, including brown, garter, and one western fox snake, all ranging in size from 4 to 10 inches. Local reptile experts were called in to manage the successful relocation of the snakes to nearby Illinois Beach State Park.

Once demolition is complete and all the unwanted material and waste is relocated and disposed of, site surveys are conducted to ensure all radioactive material is safely removed. The final job is to hydroseed (spraying a slurry of seeds and mulch) the area with native vegetation to complete the site's restoration. What has been interesting is the natural evolution that takes place with vegetation. Nature also helps with this process as portions of the land have already regenerated new growth prior to seeding.

As with any major project, especially one with Zion's scale, there was great interest from local, state, and other entities.

The Zion site as it looked in September 2010 (above) and in June 2021 (left). The site has since been revegetated with native plants. (Photos courtesy of EnergySolutions)

Operating with transparency and sharing best practices helps further knowledge within the industry, and EnergySolutions regularly hosted officials from the NRC and Department of Energy. These meetings not only ensured that all regulatory requirements were met, they also served for ongoing learning between government and private-sector operations for site remediation.

Elected officials and members of the media also frequently visited the Zion site and would share that information with the local community, assuring residents and other stakeholders about the safety of their community and the success of the project.

Snakes, discovered in a hibernaculum during the decommissioning of Zion, are safely relocated off-site.

"We understand the magnitude of the work we do and want all interested parties to be comfortable and assured that we do what we say we will," said Ken Robuck, EnergySolutions president and chief executive officer. "Ultimately we want to be viewed as a positive partner to communities and the industry, restoring the land to its natural state."

Continued

LA CROSSE

The La Crosse Boiling Water Reactor building and exhaust stack before demolition.

EnergySolutions announced in November 2019 it had completed the physical work at the La Crosse Boiling Water Reactor decommissioning project. This involved remediation and removal of radioactive and hazardous material, including confirmation surveys and inspections to demonstrate compliance with the NRC-approved license termination plan.

The company officially took operational control of the facility through an approved NRC license transfer process in June 2016 and immediately mobilized a workforce to decommission the plant. The spent nuclear fuel had already been relocated on-site to an ISFSI prior to the license transfer.

The plant is located near La Crosse, Wis., on the banks of the Mississippi River. One of the more unique challenges of the project was the demolition of the 350-foot exhaust stack. This involved securing an elevator to the outside of the structure that would haul equipment and operators to the top to begin chipping away until the stack was demolished to ground level. This process was the first noticeable change at the site.

Demolition continued with the reactor and support buildings, and like the Zion project, all of the Class A low-level waste was packaged and transported to Utah's Clive LLW disposal facility. Ongoing water and air quality monitoring is conducted through the entirety of any decommissioning project, and La Crosse was no different. During a routine inspection, analytical results from a water sample indicated elevated levels of tritium in two monitoring wells—one well closest to the reactor building and another nearby. As a

The La Crosse site in 2019 following major decommissioning. In the background is the coal-fired Genoa Station-3, which is to be retired this year.

precaution, all on-site project employees, as well as employees of the Dairyland coal plant adjacent to the reactor, switched to bottled drinking water instead of on-site well water. Although the drinking water wells are much deeper than the monitoring wells, this was deemed a prudent and cautious step necessary while sampling of the drinking wells was conducted. Test results received a week later indicated the drinking wells were safe.

Haley and Aldrich, a national environmental consulting firm experienced in tritium issues, was hired to develop a groundwater monitoring plan to track the source of the tritium. Once the system was in place, the final site restoration was completed and the project is currently awaiting final NRC approval to return all licenses back to Dairlyland Power Cooperative.

Using hydraulic equipment, workers chip away at La Crosse's 350-foot exhaust stack.

Continued

SEFOR

The Southwest Experimental Fast Oxide Reactor decommissioning project was a collaborative effort between the University of Arkansas (UA) and EnergySolutions. Together, UA and EnergySolutions petitioned the Department of Energy for funds to decommission the facility and restore the land. The project took on a three-year, three-phase approach, and while ultimately successful, it did face unique challenges. This included safely packaging compromised passivated sodium containers and removing the 84-ton reactor vessel from below grade.

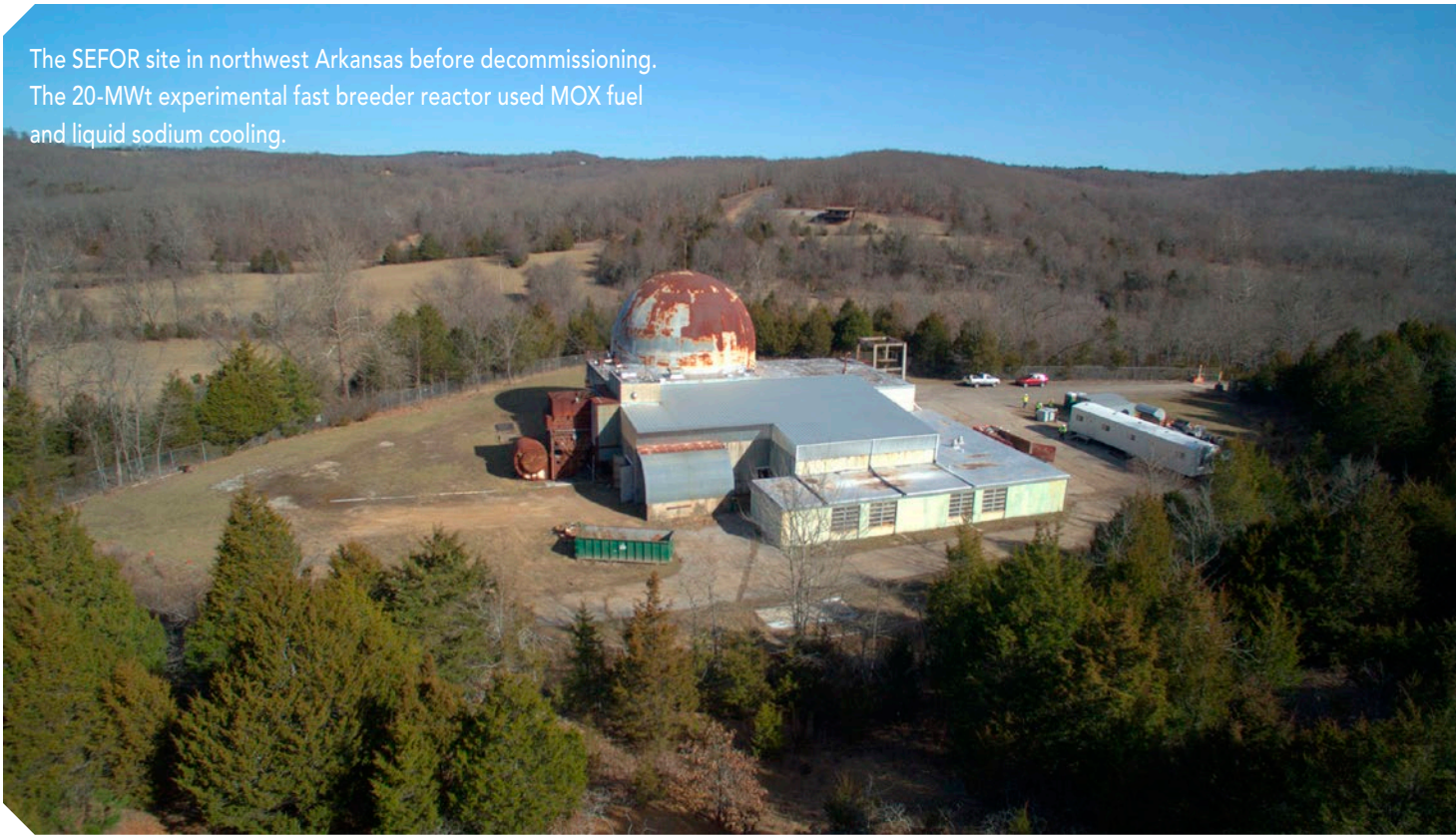
SEFOR's 84-ton reactor vessel is lifted from below ground during decommissioning.

This was a relatively small project when compared with the decommissioning of a full-scale nuclear power plant. However, this dismantling effort involved many of the same decommissioning practices, and several unique challenges, to safely complete the decommissioning. The result was a restored property entirely rid of radioactive and environmental hazards.

After the deconstruction of the facility was complete and the reactor removed, the project's final phase included site surveys to ensure all radioactive material had been removed. Scrap metal was recycled and the low-level radioactive waste safely transported and disposed of at the Clive disposal facility. Forty-nine tons of clean backfill material was delivered and graded to bring the property level. Hydroseeding technology was then used to restore the land with native grass and plants, successfully completing the decommissioning process. The property is now thriving with the growth of native plant life.

At the final SEFOR project community meeting, the DOE's Melanie Pearson Hurley said, "I'm truly happy with the collaboration we've had with the university and with EnergySolutions, but what really is commendable is this work was done safely, and I know that means a lot to you here in the community. You've lived with the structure for a long time."

With the completion of the Zion, La Crosse, and SEFOR decommissioning projects, EnergySolutions is applying lessons learned to safely decommission Southern California's San Onofre Nuclear Generating Station, the Fort Calhoun power plant near Omaha, Neb., Unit 2 of the Three Mile Island plant in Pennsylvania, and the Kewaunee power station in Wisconsin.



The SEFOR site in northwest Arkansas before decommissioning. The 20-MWt experimental fast breeder reactor used MOX fuel and liquid sodium cooling.

The SEFOR site as it looked in December 2020.

Pamela

The Fleet

(Photos courtesy of Holtec International)

Having spent more than 25 years in the commercial nuclear power community, Pam Cowan has spent time in both the front- and back-end operations of nuclear power. It is this experience that she draws upon as the senior vice president and chief operating officer of Holtec Decommissioning International (HDI) to help her build a growing fleet of power plants undergoing decommissioning and demolition.

Cowan, who came to HDI from the Nuclear Energy Institute, is also senior vice president of decommissioning and regulatory affairs for HDI parent company Holtec International and president of the Nuclear Asset Management Company, the owner of the plants. Cowan also serves as a member of the board of directors of Comprehensive Decommissioning International, a decommissioning general contractor, jointly owned by Holtec and SNC-Lavalin.

Radwaste Solutions spoke to Cowan about Holtec's fleet approach to decommissioning and her plans for HDI.

Cowan: Approach to D&D

You began your career in operations and later moved to the decommissioning side. How do you feel your background will help HDI's mission?

As you said, my background is a mix of operations and decommissioning, and I think that having the understanding of operations, especially, has supported HDI's mission of taking these sites over immediately following permanent defueling. We are the only company to have taken sites over before the zirconium fire period ends, and my strength in operations supports our ability to safely do so.

How big is that transition from operations to decommissioning for a plant and its workers?

As in any operating plant, safety remains our number one priority and will always be so. We have to be mindful of that when we first take a site, especially because we do have the hot fuel in the pool. In that aspect, there's nothing different in terms of safety first. Where it is different is that the risk profile of the site changes substantially, and therefore we have to move more into a construction or outage mentality and work through the efficiencies with the schedules. We are able to innovate and do things a bit differently through innovation than maybe we would be able to do during an outage with the risk profile being what it is.

For the personnel, our model is that when we take over a site the people become our employees. I was at first very concerned whether we would see engagement, whether workers would just see a shutdown site with the goal to work yourself out of a job. I had worked years and years ago in a summer internship at Dairyland Power Cooperative just when the nuclear plant had shut down. I remember how sudden it was and how demoralized folks felt, and I thought we would possibly experience a lot of that at our sites. But we didn't, and our people have been so engaged and been true nuclear professionals.

We're also committed to working with our site associates to help them secure other positions within the Holtec organization or elsewhere and have communicated that goal—we don't just leave them hanging at the end. I think that's been appreciated on their part, and we have seen overall very good morale throughout the fleet. And that has been interesting to me. I love to see that, because I think it's difficult enough to have to shut down the plant. Keeping the staff in place from operations, letting them properly decommission the site—they're able to put their own site to bed with pride.

Continued

The lid of a spent fuel multi–purpose canister is robotically welded at the Oyster Creek nuclear power plant in New Jersey.

Can you tell us about your overall vision for HDI?

HDI is a full-service decommissioning fleet owner, as well as a provider of services to the industry. I see HDI in the future as growing and expanding with more sites, as well as using our experience and expertise for things such as innovative tooling and packaging, advanced planning, and cost estimation.

There is a lot that we have learned so far, and with each site we get more and more efficient. As we also take on the people at each site, the nuclear professionals who have operations experience and now have decommissioning experience, it just makes us that much stronger to go in and innovate, do things better and more efficiently, and then share that with the industry.

Can you tell us about HDI's philosophy behind the fleet approach to decommissioning?

We looked at some of the things the operations industry has done with the fleet approach and how it has worked very well because they effectively are able to leverage learning, personnel, and buying power across the fleet. With that, and knowing we are in this for the long term, we wanted to capitalize on those efficiencies as well, while also enhancing safety.

We formed a fleet, within which we have a base set of procedures, processes, and governances that we developed for the fleet. We actually have, through the Nuclear Regulatory Commission, gotten approval for a Holtec decommissioning quality assurance plan. That way, no matter which site we go to, we don't have to worry about whether their quality assurance plan allows them to implement our procedures. We can adjust and transition their plans to our standard procedures—with some exceptions where it doesn't make sense, of course—and then operate as a fleet.

The benefit is that we have experience with those procedures from our other sites. We also have the peers from the plants that we currently own going to the plants we're transitioning to to help out. We saw that a lot with Indian Point. We saw the folks from operations, the rad-pro folks, from the other two stations, Pilgrim and Oyster Creek, reaching out and helping with the transition, and then helping with decommissioning in general as they understand the changes that need to occur.

We also have a standard fleet organization, an org chart, just like you would have with any fleet. We share lessons learned and innovations across the sites. To keep aligned we have morning calls on a weekly basis as a fleet. Also, our site vice presidents or other staff from each site will sit in on the other sites' monthly project and other meetings. And, of course, we have the functional area peers across the fleet reach out and share with each other.

What are some of the biggest lessons that HDI has learned so far?

Some of the lessons learned that truly have been very beneficial are the ones that involved safety and the lowering of dose. For instance, we learned some things in doing some of the segmentation of reactor internals at Oyster Creek, where we set some records. We adjusted the cut plan and had some issues with dose—not bad issues, just discovering some things we didn't anticipate—and we were able to fix them and share the experience with Pilgrim. They were therefore able to avoid having the same situation.

We are doing things like that. Any challenges we encounter with, say, new packaging or the first time we use a crane or other equipment, especially if we're sharing equipment between the sites, we will share that information. And of course, anytime there is any kind of a near miss we share that as a safety message across the fleet and across Holtec.

In terms of cost and schedule, how much room does HDI see for lowering the bar?

I think there is a lot of room for innovation. We have already seen a lot of innovation in the packaging we use, in the canister design that is allowing us to get the fuel on the pad earlier and the logistics of how we run the campaign, especially at Oyster Creek.

The critical path is really getting the fuel onto the pad, then getting the vessel segmentation done, the waste shipped, and the demolition completed. Getting the site cleaned up so that it can be characterized and move through the regulatory steps for release. I find that the more standardized you can be, especially where the regulator knows what they are going to see time and time again, that is the best place to be. While they may be different when they are operating, these sites have much more in common when shut down. So having some of that standardization will lead to increased efficiency and getting through the NRC process.

Continued

A fabrication building at the Pilgrim Nuclear Station in Massachusetts is demolished for removal.

Holtec, at its heart, is an innovator. We are a high-tech company, and we have done a phenomenal job with a lot of innovation in the spent fuel area, and we're applying that full force to decommissioning. So when we look at cutting techniques and at different areas of decommissioning and demolition, we look at how it can be enhanced using advanced technologies.

We are pleased and proud but never satisfied. It is continual improvement.

Can you give some examples of improvements you've seen in the D&D process?

I think the biggest improvements have been with the cut plan and the packages that we are using to store the materials. The fact that we were able to reduce from a standard cut plan with over 100 boxes needed to ship the [Class] B and C waste—we were able to lower that significantly at Oyster Creek. We used around about one-tenth of the original number of boxes. It was a significant reduction, and that is because we were able to design and build the boxes and utilize them as efficiently as possible.

Workers at Oyster Creek use a tool attached to an overhead crane to segment the reactor's steam dryer underwater.

Looking at HDI's three active decommissioning sites, what has impressed you the most so far?

Honestly, the efficiency with which Oyster Creek has been able to work through a lot of the segmentation of the reactor internals, as well as the ISFSI [independent spent fuel storage installation] campaign.

The other thing that has impressed me is that we look at everything, and we looked really hard at doing some early demolition to facilitate sightlines to improve our security. That allows us to be as efficient and safe as possible within our security space. Some of the innovative actions we have taken with respect to planning, integration with security, working with the NRC and others has been helpful. It has definitely improved our security footprint, as well as operations.

There have been challenges from activists seeking to prevent the transfer of power plant licenses to Holtec. How can HDI improve stakeholder relations?

I think we have good stakeholder relations, actually. I know that you see a lot of things that are in the press, and it is usually from one meeting or point in time, but overall we work very hard to have good stakeholder relationships. We had all stakeholders that filed to be a party in New York sign on to the joint petition. That was due to our focus in listening to and working with our stakeholders.

We do a lot of outreach in New Jersey, Massachusetts, and New York. And now we will be doing it in Michigan as we get prepared to take over Palisades. We pride ourselves on maintaining those relationships, and we've worked hard to not just maintain the relationship but to communicate what is going on at the sites. We want to be good neighbors.

I know that lawsuits were filed at the federal level when the license transfers came about, and there was some fighting of the application, but I think the individuals that are doing that, they just want to make sure they have a voice and that it gets done right. They usually request more detail than maybe is required or to actually get the job done.

Pilgrim workers safely transport a spent nuclear fuel cask to the site's newly constructed dry storage pad.

They also just want to make sure that there's less uncertainty with funding. We have worked very hard to come up with payment in lieu of taxes, PILOT, agreements in the communities so they will know what their revenue sources will look like. It is a big hit to these communities when a plant no longer operates. And we can help them by working with them to come up with these alternative tax arrangements to help soften the blow. We have done what we can in that area, and again worked with our other stakeholders to make sure that if we have an agreement then those agreements meet the mark. It is something that we just have to do right now to get folks more comfortable that, yes, this can work and the plant will get decommissioned and we're not going to just walk away from the site.

Do you think those relations will get easier as HDI completes projects?

Absolutely, I think it will get a lot easier. And as we get more and more experience it will add not only to the confidence that we have, but also to the confidence of those communities that we go into, that we will be able to do what we say we will do. But that is only if we do it well, which we have been doing. Our focus now needs to maintain on execution and continuing to do a great job.

How do you feel the current regulatory framework supports decommissioning, and are there any changes you would like to see?

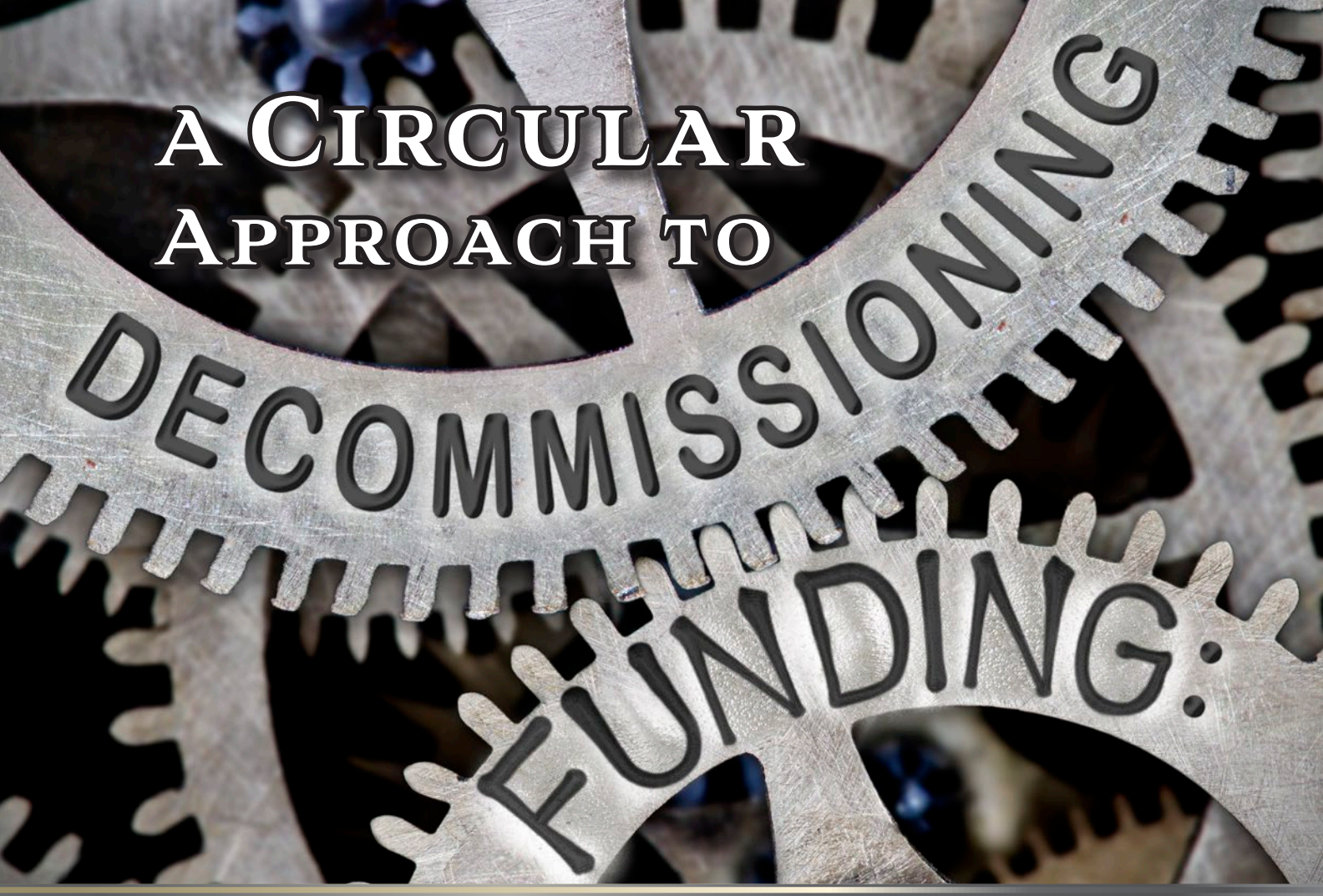
With some of the newer [NRC] inspections and inspection procedures, the jury is still out. We will have to see how they work. I have some ideas, and I'm working with the NEI [Nuclear Energy Institute] and its working group to get feedback, making sure that we're aligned, and then getting some feedback from the NRC. Risk-informed regulation is important, and this is a low-risk area, and I'll leave it at that. I think that the inspections, the man-hours, and reviews should match the risk.

Would you like to see a decommissioning rulemaking from the NRC?

I was the industry lead of the decommissioning rulemaking group for NEI when the NRC was initially doing this in 2014 when the rulemaking restarted, and I remember then thinking, 'Oh my gosh, we think it will take five years—it's going to be forever.' And here we are seven years later.

I think it is great that the NRC has the ability, through the regulations, to allow for exemptions. And that is part of the process, recognizing you cannot cover everything. I think that's great. But I think that when you have 15 or however many exemptions that are pretty much the same, and there's a rulemaking being proposed, I think it's time to move forward. It is less efficient to do it exemption by exemption, so it is an efficiency issue.

And again, I want folks to be risk informed and focus on risk areas. I'm not sure I want them spending time to review the same multiple exemptions just to transition into decommissioning. So yes, I think it would be nice to have the rule approved.



A Circular Approach to Decommissioning Funding: An NEA Report

On June 18, the Nuclear Energy Agency of the OECD released the report *Ensuring the Adequacy of Funding for Decommissioning and Waste Management* (NEA No. 7549). The 239-page report, which focuses on the interdependency of costs and funding requirements on the one hand and changes in nuclear policy, such as long-term operation or premature shutdowns, as well as technological progress on the other hand, consists of three parts: a conceptual framework, 12 country case studies on funding arrangements, and a synthesis of elements of good policy practice.

Moreover, the report argues that the current "linear" approach to assessing financial adequacy, which is based on the linear discounting of estimated future costs for decommissioning and waste disposal, should be complemented with a broader "circular" approach, in which funding arrangements continuously adapt as new information on costs, social preferences, policy objectives, lifetimes, or rates of return on existing assets becomes available.

The following is an excerpt from the NEA report, edited for length and clarity.

From a Linear to a Circular Approach

Current approaches to the adequacy of funding for decommissioning and radioactive waste disposal typically use a simple linear decision-making framework based on the assumption that key parameters such as future costs, the discount rate, the return on capital, or the operating lifetimes of nuclear power plants will remain stable for several decades. Frameworks that are more sophisticated will work with stochastic confidence intervals without abandoning the simple, one-directional logic of discounting assumed future costs to the present.

The present report instead proposes a circular decision-making framework, in which all elements of the system can vary, while continuing to feed into each other. Adequacy of funding is thus no longer defined by comparing estimated future costs, discounted by an assumed social discount rate, and accrued funds. Instead, the adequacy of funding is assessed by considering whether decision-making processes are capable of taking into account changes in key parameters in a manner that is sufficiently robust and sophisticated to align and realign them in different constellations. Such key parameters will include the envisioned technical solution and its costs, constituted assets and rates of return, as well as the lifetimes of nuclear power plants and evolving societal preferences (see Fig. 1).

While the linear framework with its unidirectional causality from estimated costs to current assets is too simple, it remains, as long as stakeholders are aware of its limitations, a useful starting point. Its transparency and simplicity, even if to some extent fictitious, have been instrumental in setting up funding systems, informational infrastructures, and legal obligations. However, it is also incomplete where there exists radical uncertainty.

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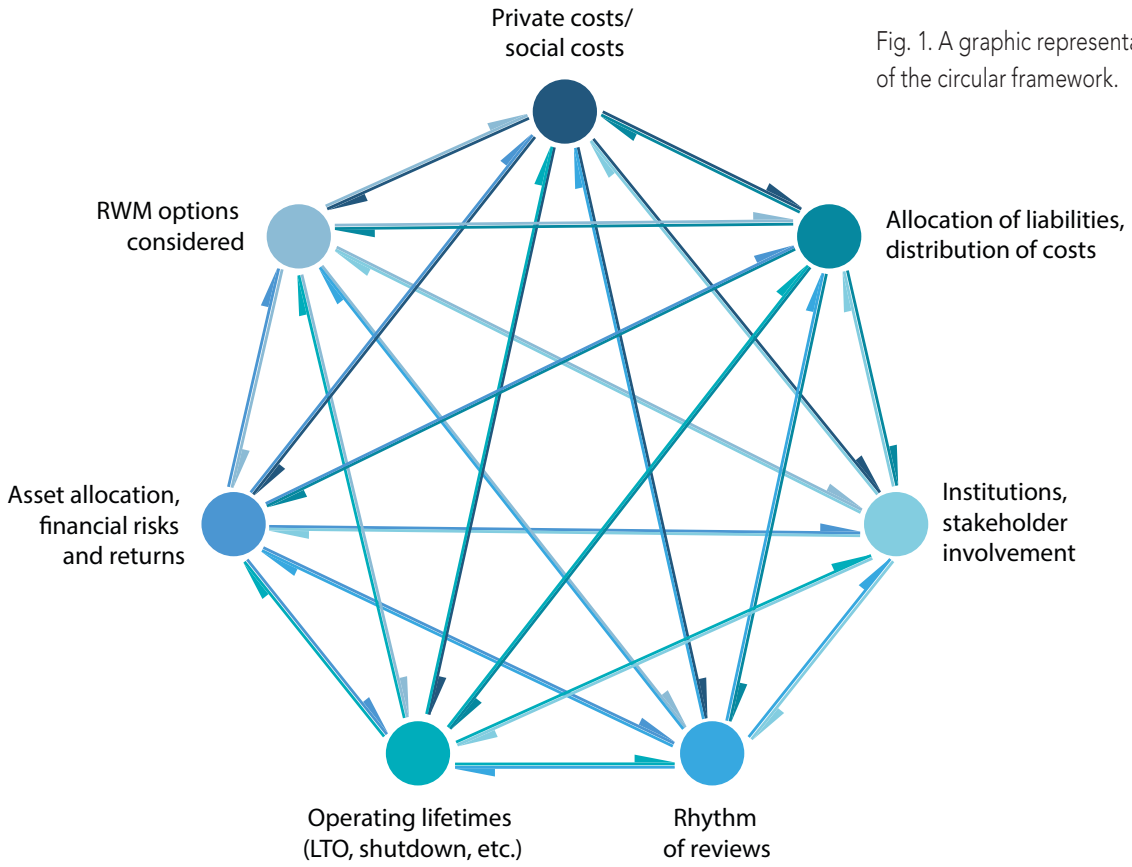


Fig. 1. A graphic representation of the circular framework.

The challenge is to maintain the robustness of funding systems at a moment where a number of framework conditions are changing significantly, including macroeconomic framework conditions, energy policymaking, societal preferences, or the structure of electricity markets. Such uncertainties are magnified by the context of funding for decommissioning and radioactive waste management (RWM): long delays between current decision-making and eventual implementation, a high level of residual uncertainty concerning technologies and costs, as well as considerable political sensitivity. The circular approach is based on five principles:

1. Interdependence and bidirectional causalities: All elements are interconnected with all other elements of the funding systems; causalities are complex and bidirectional.

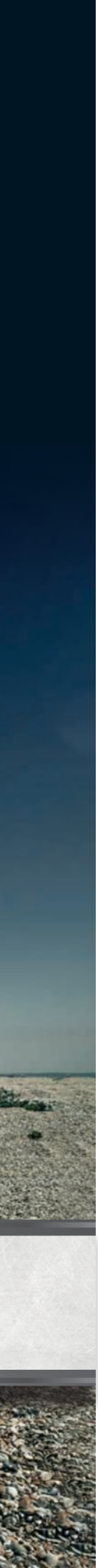
2. Endogenous nature of cost estimates: The costs of decommissioning or RWM are not an objective, exogenous number but depend on political, regulatory, and technical choices and the redrawing of system boundaries.

3. Adaptability: All elements, including cost estimations, expected revenues, and liability allocation must be able to adapt to endogenous (e.g., changes in societal preferences) and exogenous changes.

4. Possibility of discontinuous changes: Technological changes and political choices can introduce discontinuous change requiring radical adaptations outside initial assumptions.

5. Regular revisions with stakeholder involvement: Revisions must take place at regular intervals specified in advance, be legitimated by appropriate institutional processes and involve all stakeholders.

England's Dungeness A nuclear power plant in 2006, shortly before the reactor was shut down. The plant is undergoing limited decommissioning activities in preparation of a care-and-maintenance period expected to last 60 years. (Photo: NDA)



The essence of the circular approach is that a necessary evolution of the system can be triggered by any given element of the system. This could be a change in economic framework conditions, a political decision to shorten or extend the operating lifetimes of nuclear power plants, a new technological or legal option for RWM or new societal pressures to accelerate or delay the implementation of RWM solutions. By its very nature, the circular approach is adaptive and iterative.

The circular approach considers in particular RWM a societal and political issue as much as an industrial and commercial issue. This does not imply freeing operators and their customers from their financial obligations, which are part of the original social contract under which nuclear power plants were constructed and operated. However, once they have paid their fair share—and fairness is here a political question to be decided at the national level—operators are unlikely to be best placed to assume the liability for decisions that affect issues outside their competence or even legitimacy. For instance, the timing or location of a deep geological repository, both parameters highly relevant for costs, are not for an electricity company to decide. Even if it organized the process, this could, depending on circumstances, pose difficult legal and administrative questions.

One should also note that an adaptive or circular approach does not imply perennial uncertainty. Changes in key parameters or respective responsibilities will play out over time gradually and deliberately. The key point is to put in place the institutional processes to organize the adaptation of the funding system in function of changing circumstances as well as political decisions. Even more important than the specific financial assumptions are the processes, institutional settings, and distributional arrangements in which such revisions take place. Ultimately, the financial sustainability of the funding systems also depends on the political sustainability of the overall framework and the perceived fairness of the decision-making process.

Discount Rates

Discount rates determine how future revenues and liabilities are taken into account in the present. They also determine the trade-off between the well-being of the present generation and that of future generations. Discount rates are thus a crucial element of the implicit social contract between generations on which the funding for decommissioning and RWM also relies. Depending on timing, the discount rate establishes how estimated future costs translate into required levels of assets today.

Traditionally, the social discount rates of the kind used in the calculation of the net present value (NPV) of public-sector projects were lower than the private discount rates that correspond to the cost of capital in financial markets. There are good economic reasons for this. Governments should care for the welfare of future generations, especially if they subscribe to the intergenerational equity principle. Large public-sector projects frequently also have lower costs of capital due to explicit or implicit government guarantees. Governments can provide such guarantees at low costs because they can pool and spread risks over a large number of projects and individuals.

However, discussions about the appropriate setting of discount rates have been thrown into disarray due to the extremely low market interest rates, far lower than the 2 or 3 percent historically associated with social rates that also determined the level of required assets to finance future projects. In April 2021, the real return on U.S. 20-year bonds stood at -0.2 percent. U.S. Treasury bonds are a global benchmark and, because of their liquidity and the credit-worthiness of the U.S. government, define what is considered the risk-free rate of return.

The expansionary monetary policies referred to as "quantitative easing" that have been in place in all OECD countries since the economic crisis of 2008 thus make for very low returns on risk-free and low-risk assets such as government bonds. This does not necessarily mean that all funding systems for the back end of the nuclear fuel cycle have had low financial returns these recent years. Those allowed to invest in equities and other riskier assets have done rather well from "asset price inflation" (i.e., rising prices for certain financial assets). Despite the very modest returns on low-risk assets, there is no sign anywhere of a crisis in the funding of decommissioning and RWM liabilities.

Continued

Accelerated Decommissioning Partners began decommissioning of Florida's Crystal River-3 nuclear power reactor in 2020. The company expects to complete the project by 2027 at a cost of around $825 million. (Photo: Duke Energy)

Nevertheless, a number of developments merit attention. The discount rates used to establish funding requirements continue to differ strongly from country to country. Several countries have either reduced the discount rates for calculating required current assets, with significant impacts for liability holders, broadened the range to include riskier assets with higher returns, or both. Much of this is very sensible. Yet riskier investments imply a higher risk of shortfall at the time of disbursement. Hitting a precise level of funds at a given date in the future with reasonable certainty, something that was possible in the past, for instance, with indexed bonds, has become far more challenging. Recent events such as the coronavirus crisis of 2020 and 2021 reinforce this point. Current macroeconomic circumstances constitute a further argument in favor of funding systems with high degrees of flexibility as well as an allocation of liability to the party that is capable of adjusting RWM solutions or of covering any potential shortfall by fiscal or monetary means. ⊠

NEA (2021), Ensuring the Adequacy of Funding Arrangements for Decommissioning and Radioactive Waste Management, *Nuclear Development, OECD Publishing, Paris, https://doi.org/10.1787/6b316bb6-en.*

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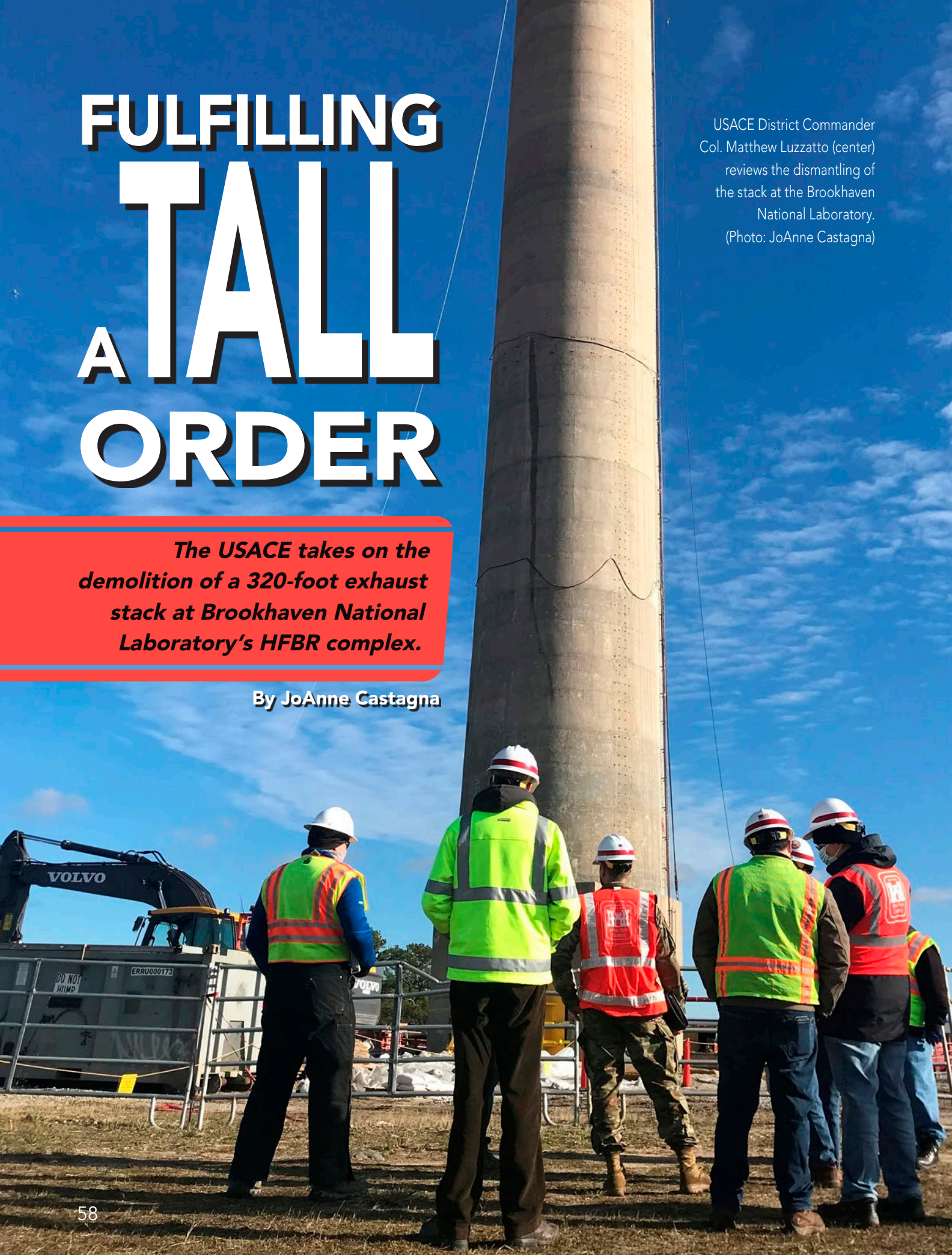
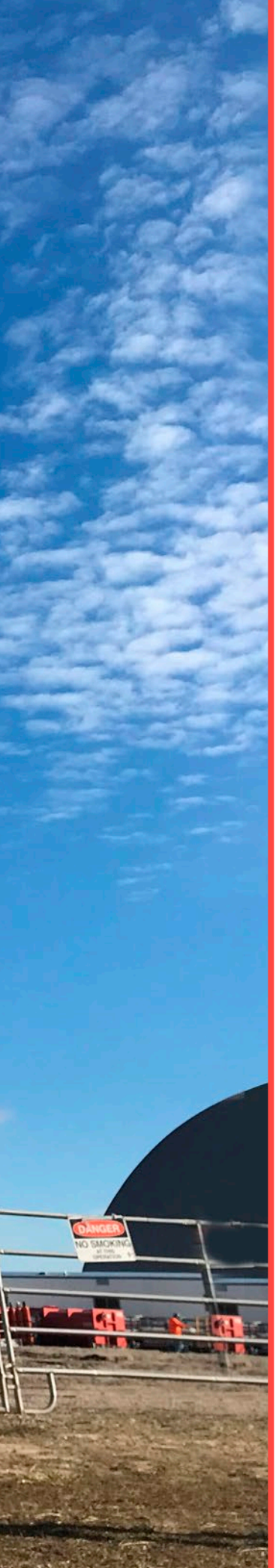


USACE District Commander Col. Matthew Luzzatto (center) reviews the dismantling of the stack at the Brookhaven National Laboratory. (Photo: JoAnne Castagna)

The USACE takes on the demolition of a 320-foot exhaust stack at Brookhaven National Laboratory's HFBR complex.

By JoAnne Castagna



The Brookhaven Graphite Research Reactor with the iconic exhaust stack it shared with the lab's High Flux Beam Reactor in the background before the stack was demolished. (Photo: BNL)

In providing tangible, real-world solutions for some of the nation's toughest challenges, the U.S. Army Corps of Engineers, New York District, continues to demonstrate its unique engineering and construction capabilities. The latest example involves the Brookhaven National Laboratory on Long Island, N.Y.

Over the years, the lab has been on a mission to remove old buildings on its property that contain legacy radioactive material that was a result of past work. Many have been removed or decommissioned so far, but one high-profile structure has remained—a towering smokestack. Using the latest in demolition technologies, the New York District has now safely removed that exhaust stack.

"This project is another example of the exceptional work New York District does on a daily basis," said District Commander Col. Matthew Luzzatto. "I couldn't be prouder of our team, because they are addressing unique challenges, working closely and transparently with contractors and our partners at the Department of Energy, and ensuring safe and effective execution of the work."

To perform this work, the Army Corps of Engineers has partnered with contractor Olgoonik Development, its subcontractor ICC Commonwealth, and the Department of Energy's Office of Environmental Management, which is responsible for the environmental remediation of the High Flux Beam Reactor stack at Brookhaven.

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The national laboratory is in the town of Brookhaven, about 60 miles east of New York City. Since 1947, this multipurpose research institution—known for its seven Nobel Prize-winning discoveries—has performed pioneering research in physical, biological, and environmental sciences, as well as in energy technologies, computation, and national security.

The lab's 5,300 acres of property sits on the former site of the U.S. Army's Camp Upton. Near the center of the site—standing like a beacon—is a tall, red-and-white concrete stack. The stack marks where the 13-acre High Flux Beam Reactor (HFBR) complex sits. The 60-MW reactor operated from 1965 through 1996 and was permanently shut down by the DOE in 1999.

The complex includes two research reactors—the HFBR and the Brookhaven Graphite Research Reactor (BGRR). The BGRR was decommissioned and dismantled over a decade ago; the HFBR has been similarly dismantled except for the reactor vessel, which will be removed in the future.

These reactors performed outstanding work in their day. The HFBR is known for many accomplishments, including being a dependable source of neutrons that have been crucial to a wide array of scientific research programs. It is also known for discovering new uses for radioactive isotopes for treating cancer, cardiovascular disease, arthritis, and other medical conditions.

The BGRR had its share of achievements, including being the world's first reactor built solely to perform scientific research on peaceful uses of the atom after World War II.

Ventilation lines and ducts transported exhaust air from these two reactors through filters to the stack. The distinctive stack stands 320 feet tall and has a tapered cone shape; its interior base diameter is almost 27 ft and the interior top diameter is almost 19 ft.

The stack was used to discharge cooling air from the BGRR and later to ventilate equipment and rooms in the HFBR and other support buildings on the complex. This exhaust included radioactive material.

This hazardous material contaminated the interior of the stack, up to three-fourths of an inch in depth. In addition, the red-and-white paint on the stack's exterior contained asbestos and lead. Removal of the stack was one of the last remaining actions related to the cleanup plan for the complex. USACE offered Brookhaven and the DOE a safe and efficient alternative solution to removing the stack using the latest demolition technology.

Over the past 20 years, the stack has been radiologically analyzed by the DOE and the lab through the gathering of concrete core samples, surface contamination or swipes, stack drain water, sediment, soil, and air samples. Samples were analyzed for gross alpha, gross beta, and gamma spectroscopy, as well as the entire thorium, uranium, and plutonium series.

The primary radionuclides found included cesium-137, tritium, and strontium-90, with the total estimated Curie content present in the stack concrete of 29.7 millicuries (2005).

To demolish the stack, the contractors first removed the contaminated paint. A hydro-blasting technique was applied that used high-pressure water to remove the paint from the concrete. The paint was then vacuumed up at the point of removal from the stack's surface and contained in a closed system. This procedure minimized the release of any hazardous material and eliminated the need for workers to directly handle the contaminated waste.

Next, the contractors began dismantling the stack using what is called the MANTIS demolition system. This is a remotely operated hydraulic machine that has proven effective in dismantling concrete chimneys ranging in height from 200 ft to 835 ft. The machine sits on a movable scaffolding system that encompasses the entire diameter of the chimney, allowing the operator and crew 360 degrees of access while maintaining a safe distance from demolition operations.

"With this system, the equipment actually sits on top of the stack and walks its way down as it chips away," said Matthew Creamer, USACE project manager. "Each piece of concrete is broken out, the rebar supports are cut, and it all falls inside the stack for removal. By the stack collecting its own waste, it keeps workers and the surrounding area protected from hazardous material. The system also produces limited vibration, which protects nearby lab equipment from being damaged."

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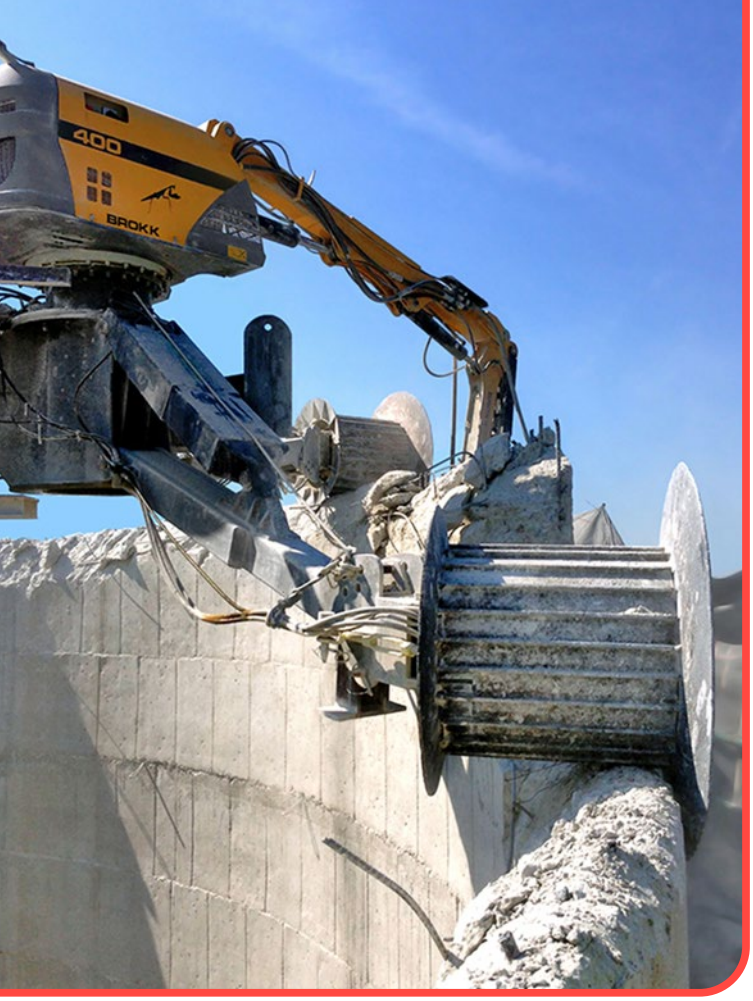
A MANTIS demolition system is set up at the top of the reactor complex stack to safely and efficiently dismantle the structure. (Photo: JoAnne Castagna)



Above: An example of the MANTIS system being used at a stack demolition project outside of Brookhaven. (Photo: ICC Commonwealth)

Additional safety measures were put in place to protect workers and the surrounding environment. Water sprayers were installed on the MANTIS equipment and at the bottom of the stack to suppress dust from the concrete. In addition, air samples were continually monitored to make sure there were no contaminants in the work area, and silt fencing was set up around the work area to prevent any contaminated water from running off the site.

Crews finished dismantling the stack down to the base, approximately 36 ft above ground, before fully demolishing it in February of this year. All contaminated soil, debris, and material was removed and transported to Waste Control Specialist's low-level radioactive waste facility in Andrews, Texas. When the project is completed, a final survey of the site will be performed, and the land will be graded with clean soil.

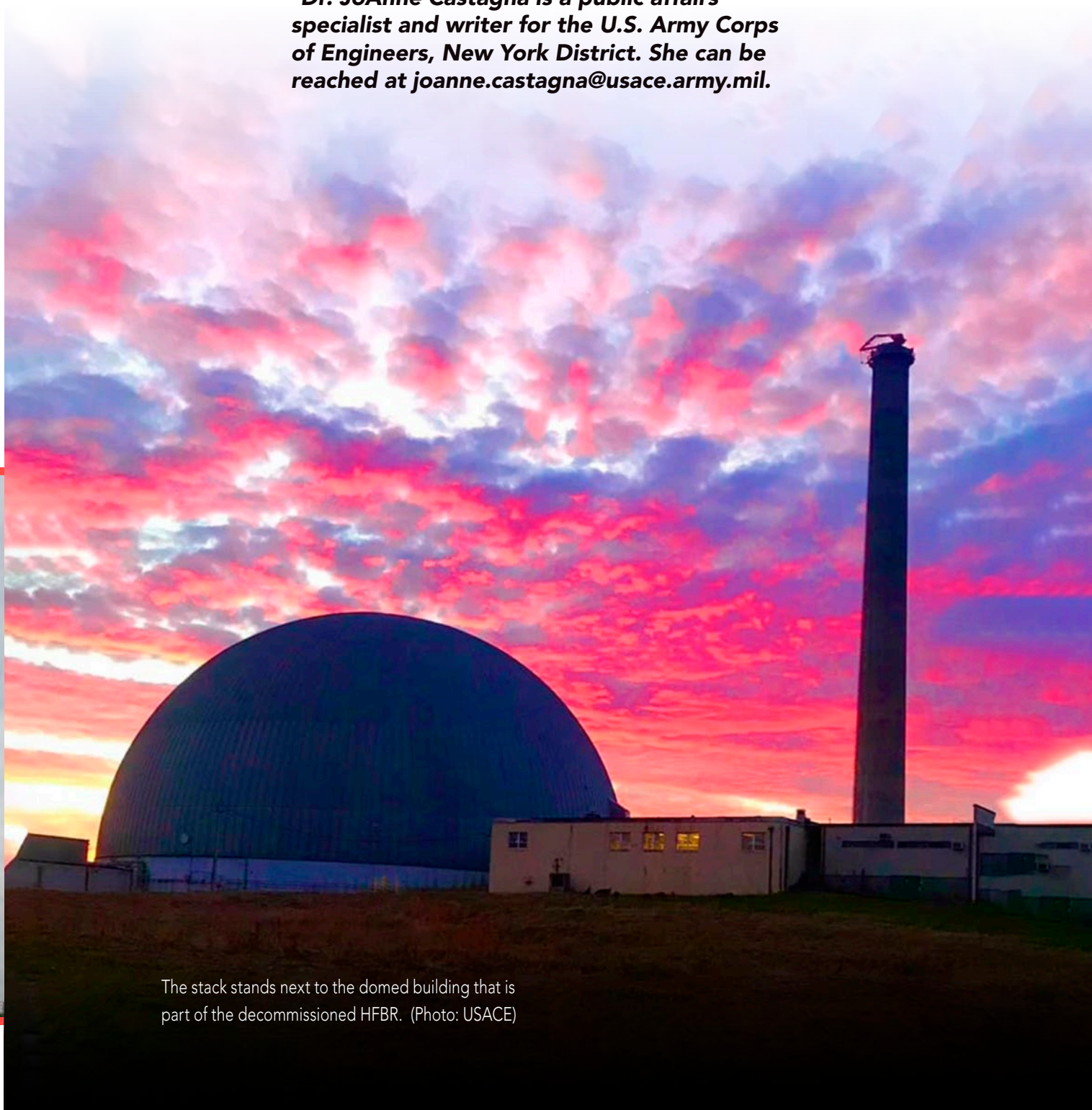
"Removing this stack is a significant milestone for Brookhaven National Lab's voverarching environmental restoration program that supports the health and well-being of our community and environment,"

said Peter Genzer, manager of Brookhaven's Media and Communications Office.

Below: The exhaust stack's distinctive red and white paint, which contained asbestos and lead, was removed late in 2020. (Photo: DOE)

Brookhaven National Laboratory's army of research scientists are hard at work performing research on a wide range of disciplines. The Army Corps of Engineers is making sure that where they do this critical work for the nation is safe.

Dr. JoAnne Castagna is a public affairs specialist and writer for the U.S. Army Corps of Engineers, New York District. She can be reached at joanne.castagna@usace.army.mil.



The stack stands next to the domed building that is part of the decommissioned HFBR. (Photo: USACE)

Idaho's Spent Fuel Database

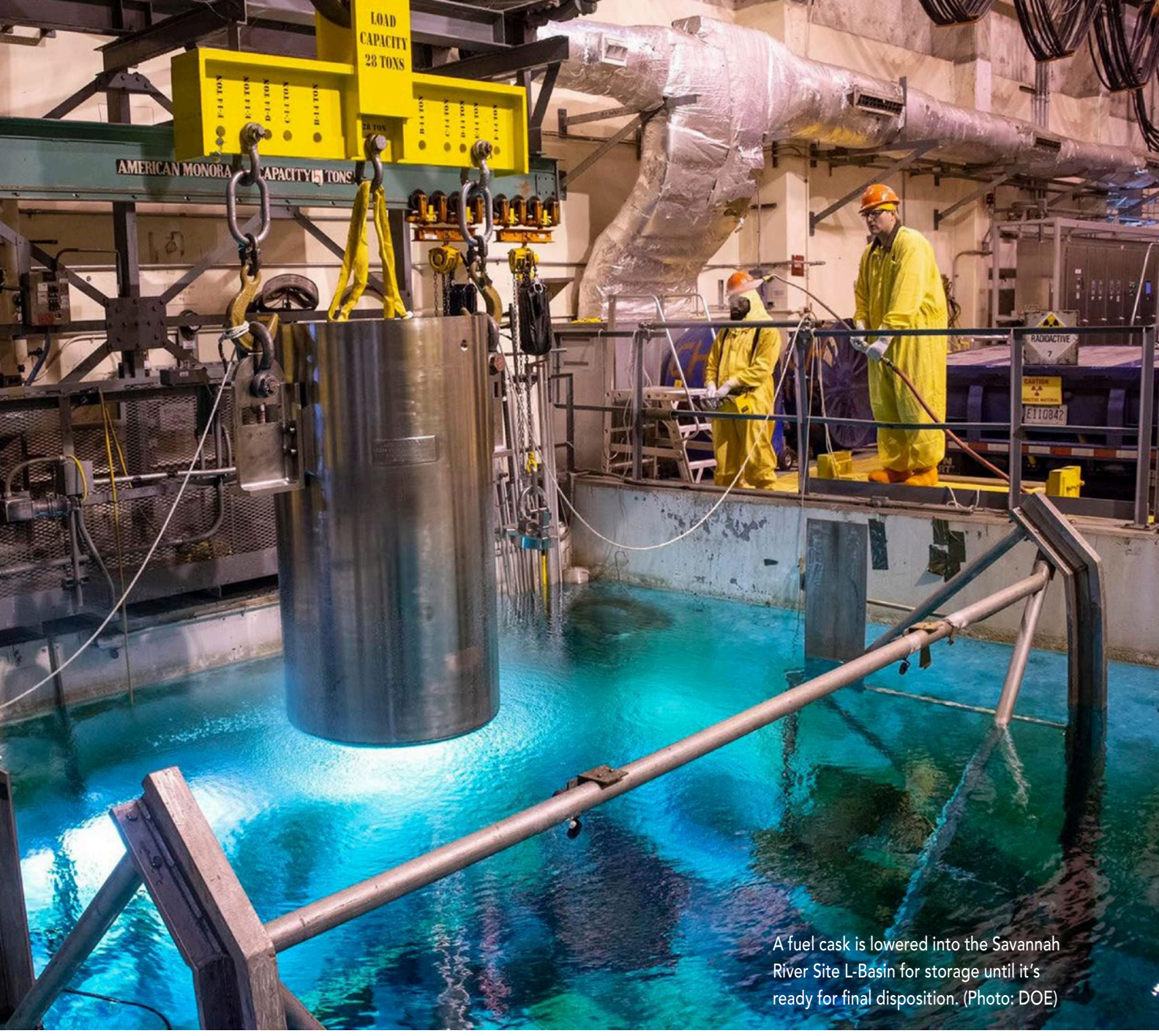
Recently updated, Idaho National Laboratory's SFD provides a centralized source of information on the DOE's inventory of spent nuclear fuel.

By Layne Pincock and Brett Carlsen

The Department of Energy's Office of Environmental Management sponsors the spent fuel database (SFD) to retain and manage information related to DOE-owned spent nuclear fuel in support of its spent fuel management and waste disposition efforts. It was originally created in 1995 to support the DOE's programmatic environmental impact statement (EIS) [1] for the management of spent nuclear fuel. Later, the SFD was used extensively to support planning, scoping, and analysis of DOE spent fuel for the license application of the proposed Yucca Mountain repository.

Following the loss of funding for the Yucca Mountain project, funding for the SFD was terminated around 2011. However, the need for a centralized, controlled source of information for management of DOE spent fuel persisted. Funding for maintenance of the SFD was restored in 2016. Since then, work to update the SFD to reflect current inventories was done, and the SFD application was updated to function on modern operating systems.

The SFD serves as a controlled source of information to support planning for the long-term management and disposition of DOE spent fuel. Ready access to SFD information has proven valuable for other purposes, such as the International Atomic Energy Agency joint-convention report on spent fuel management for the United States [2].



A fuel cask is lowered into the Savannah River Site L-Basin for storage until it's ready for final disposition. (Photo: DOE)

In contrast to commercial spent fuel (contained in the Unified Database in the Used Nuclear Fuel-Storage, Transportation & Disposal Analysis Resource and Data System [UNF-ST&DARDS]) [3], which is composed of large inventories of very similar spent fuel, DOE spent fuel is more diverse. The SFD currently contains more than 700 unique fuel records. This is the result of more than 70 years of creating various one-off research reactors using fuels with a broad range of geometries, fuel compositions, cladding materials, etc. The inventory in the SFD also includes spent fuel from university and foreign research reactors.

Currently, the SFD runs within a Windows (client-server) application that securely connects to a structured query language (SQL) server where the spent fuel data reside. The application provides a user-friendly interface, allowing the user to view and update data. Data updates are carefully managed through an established quality assurance process to ensure that all changes are reviewed and traceable to their sources and that data quality is maintained. The SFD application also allows the user to add backup reference data to each fuel record.

Version control is maintained on both the SFD data and the SFD application according to established procedures. Due to the nature of some information contained in the SFD, it is maintained on a secure server with appropriate access controls.

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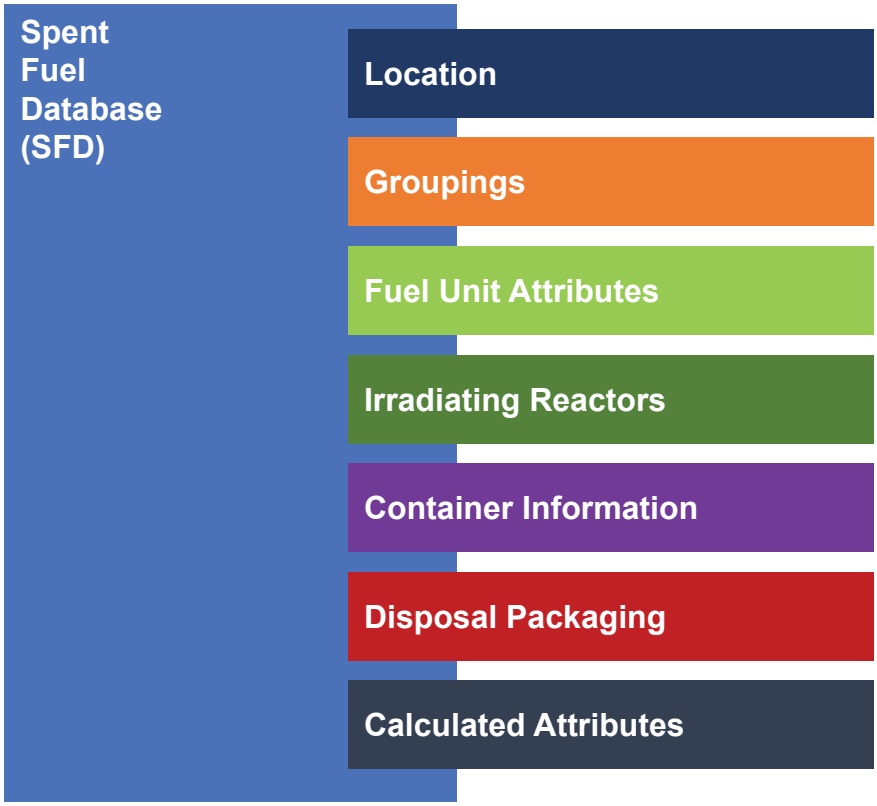


Fig. 1. Main SFD attributes

Data Attributes

The data contained in the SFD were collected from custodians at various sites where spent fuel is stored. The majority of the fuel is located at three main sites: the INL Site, the Savannah River Site (SRS) in South Carolina, and the Hanford Site in Washington state. Projected spent fuel inventories are also accounted for in the SFD.

Spent fuel attributes are currently collected into seven main areas, as shown in Fig. 1.

Location

Location attributes provide information relative to where and how the fuel is stored, including site location, area within the site, the area's facility, specific location within the facility, and whether the fuel is in wet or dry storage.

Groupings

Because of the diverse nature of DOE spent fuels, these fuels have been grouped based on characteristics relevant to specific analyses or management scenarios. For example, to perform repository disposal criticality analysis, it was prudent to put the DOE fuel into a small number of criticality groups to avoid having to perform separate criticality analyses for each of the fuel records in the SFD.

There currently are five different fuel groupings in the SFD: the top-level grouping, the EIS category grouping, the total system performance assessment grouping, the criticality grouping, and the design-basis events grouping.

Fuel unit attributes

The SFD contains specific attributes associated with the fuel unit itself. These eight attributes include fuel unit type (e.g., assembly, rod, plate, element, etc.), number of fuel units, cladding material, fuel compound, fuel matrix, bonding material, fuel geometry (e.g., cylindrical, circular, square, annulus, etc.), and physical dimensions.

Irradiating reactors

Data and attributes associated with the reactor in which the fuels were irradiated are also contained in the SFD and include the irradiating reactor (and data relating to that reactor), burnup data (average and maximum), and beginning-of-life and end-of-life thorium, uranium, and plutonium isotopes.

Container information

The SFD tracks information on the storage container in which each spent fuel record is currently stored. The SFD allows for these containers to be nested to account for

containers within containers. The container information includes container name and type (including size and mass), as well as the number of containers, their condition, and container hierarchy (nesting information).

Disposal packaging

Information on how the fuel of record is packaged into a disposal canister or how the fuel record may be packaged into disposal canisters is included in the database. The projected loadings are mostly based on the dimensions of the fuel and documented plans [4]. Disposal packaging information includes the disposal canister type (e.g., 18-inch × 10-feet, 24-in. × 10-ft., 18-in. × 15-ft., 24-in. × 15-ft., or multi-canister overpack), fuel units per canister, basket type, and number of baskets per canister.

Calculated attributes

Finally, the SFD contains seven calculated fields using other information in the database. These calculated fields include estimates of the isotopic compositions as a function of time and the associated activities, gamma radiation, and decay heat. Calculated fields also provide the total mass of heavy metal, total volume, and number of disposal canisters.

The isotopic compositions consist of 145 radionuclides that have the greatest impact on dose rates, disposal performance assessment, and criticality.

Isotopic compositions are calculated based on a methodology previously developed by the authors of this article with the help of a team of subject-matter experts. This methodology is described in detail in the DOE report *Source Term Estimates for DOE Spent Nuclear Fuels* [5]. The process relies on precalculated templates that provide radionuclide inventories for typical spent fuels with a range of decay times (5–100 years). An appropriate template is selected based on key fuel characteristics. The results for the appropriate decay time are selected from the applicable template and then scaled by mass and burnup to estimate the radionuclide inventory.

Output Results

Based on data and attributes contained in the SFD, many different reports and outputs can be generated. Frequently used reports can be generated directly from the SFD application. Custom reports can be created using an SQL query and enhanced using graphing tools, such as MS Excel, to graph or visualize the data. A few examples are described here.

Summary outputs

First, the SFD application is capable of displaying summary information based on the spent nuclear fuel records that are selected. When all fuel records are selected, the summary information in Table 1 is displayed. The user can easily filter the data to a desired subset of SFD records based on spent fuel attributes (e.g., location, reactor, fuel characteristics, or various grouping attributes).

Continued

Table 1. Example summary information from SFD.

	Current	2035 Estimate
Number of fuel units	**236,253**	**257,210**
Total volume (m^3)	**879**	**977**
Mass (MTHM)	**2,464**	**2,478**

	Mixing	No Mixing
Estimated number of disposal canisters	**3,349**	**3,713**
BWR assemblies		**80**
PWR assemblies		**87**

	2030
Nominal (Ci):	**1.2×10^8**
Bounding (Ci)	**2.4×10^8**
Number of records selected	**716**

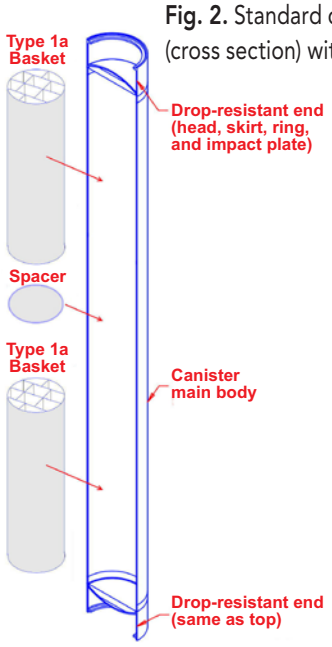


Fig. 2. Standard disposal canister (cross section) with baskets.

Disposal canisters

A standard disposal canister design was developed to facilitate storage, transportation, and disposal of DOE spent fuel. DOE standard canisters include canisters of 18- and 24-in. diameters in 10- and 15-ft. lengths [6]. There is also a multi-canister overpack (MCO) that stores spent fuel from Hanford's N-Reactor and some other spent fuels from the site. The MCO [7] is about 24-in. in diameter and about 14-ft. long.

Much of the DOE spent fuel will be loaded into canisters using various baskets to maintain geometry within the canister. Depending on the length of the fuel, the baskets may be stacked, as illustrated in Fig. 2.

When loading canisters, two options exist. First, canisters can be loaded assuming that fuel types can be mixed within a canister. The second option assumes that no mixing occurs between fuel types, resulting in more partially loaded canisters.

The result of querying data from the SFD for all sites is shown in Fig. 3 for both the mixing and no-mixing options. Filtering to show just the INL mixing scenario, we get the results illustrated in Fig. 4.

Looking one level deeper into INL basket loading information, we get the

Fig. 3. Canister count estimates for all sites.

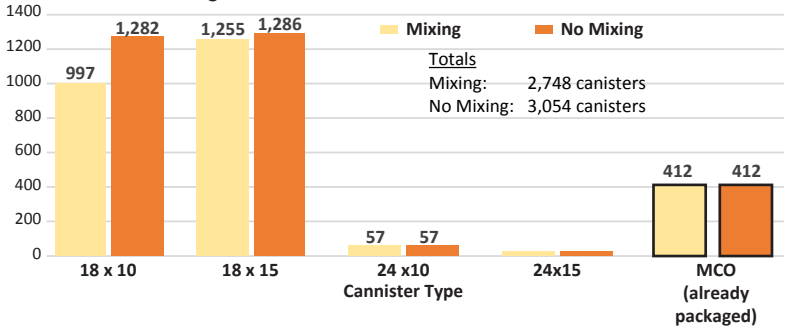
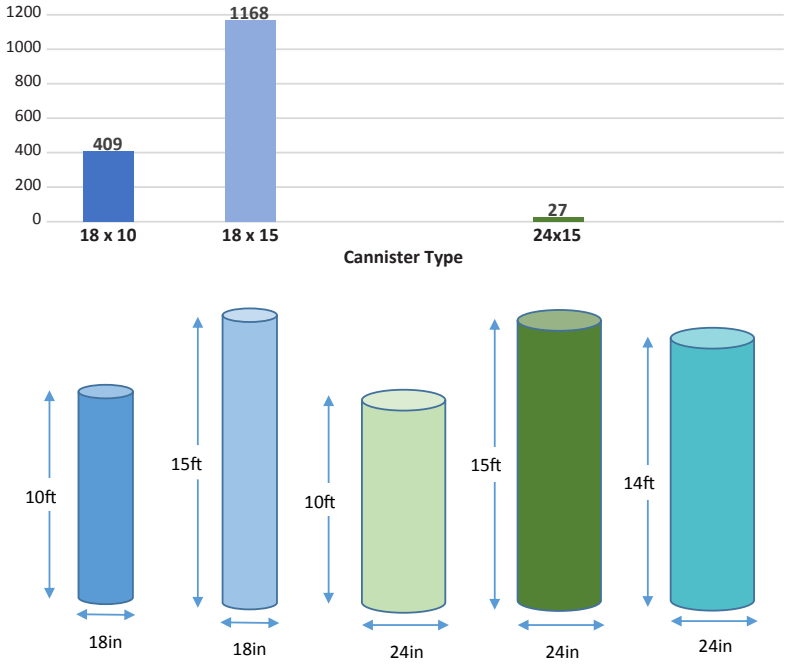
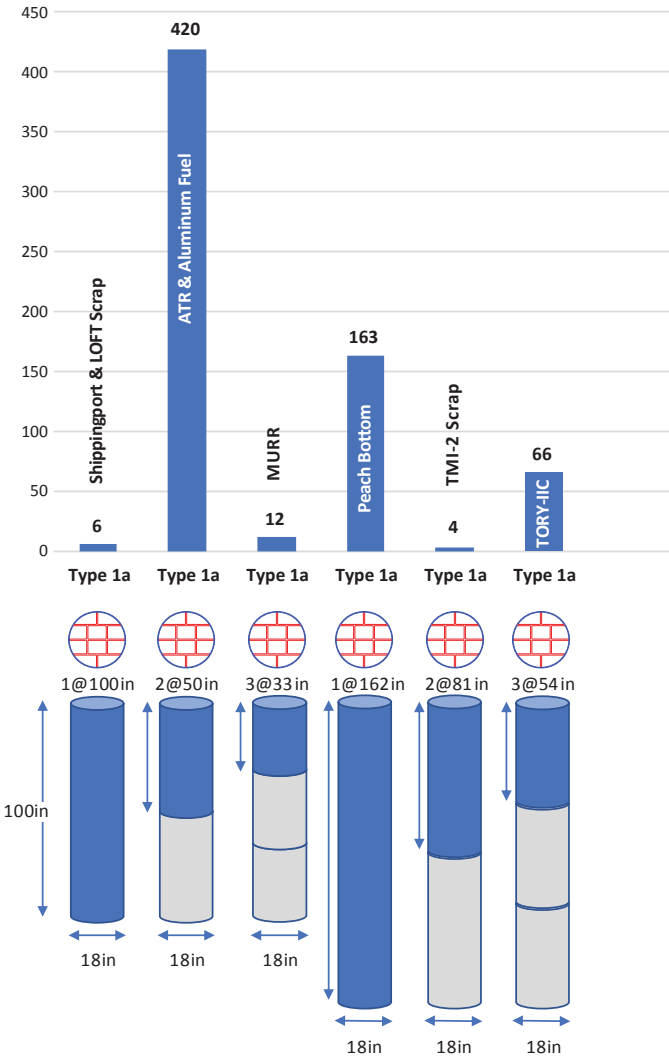


Fig. 4. INL disposal canister estimates (mixing scenario).





information shown in Fig. 5. The database query provides the estimated number and size of canisters that will be needed. It also provides an estimated number of the different types of baskets that will be needed to package the fuel at INL (and the number of canisters that do not need baskets).

This canister loading data proved to be very useful for an integrated team of DOE and contractor personnel studying the various alternatives for the management of spent nuclear fuel at INL. It provided the data needed to determine the size, throughput, and design requirements of a canister packaging plant capable of packaging spent fuel at INL into a road-ready configuration. It likewise enabled the development of a basis for a preferred path forward for the management of INL's spent fuel.

These canister counts, along with the projected radionuclide inventories from the SFD, were used in the Yucca Mountain license application to estimate the thermal and radioactive source terms for DOE spent fuel waste packages. SFD data supports similar analyses for various scenarios addressing future storage, transportation, and disposal of DOE spent fuel.

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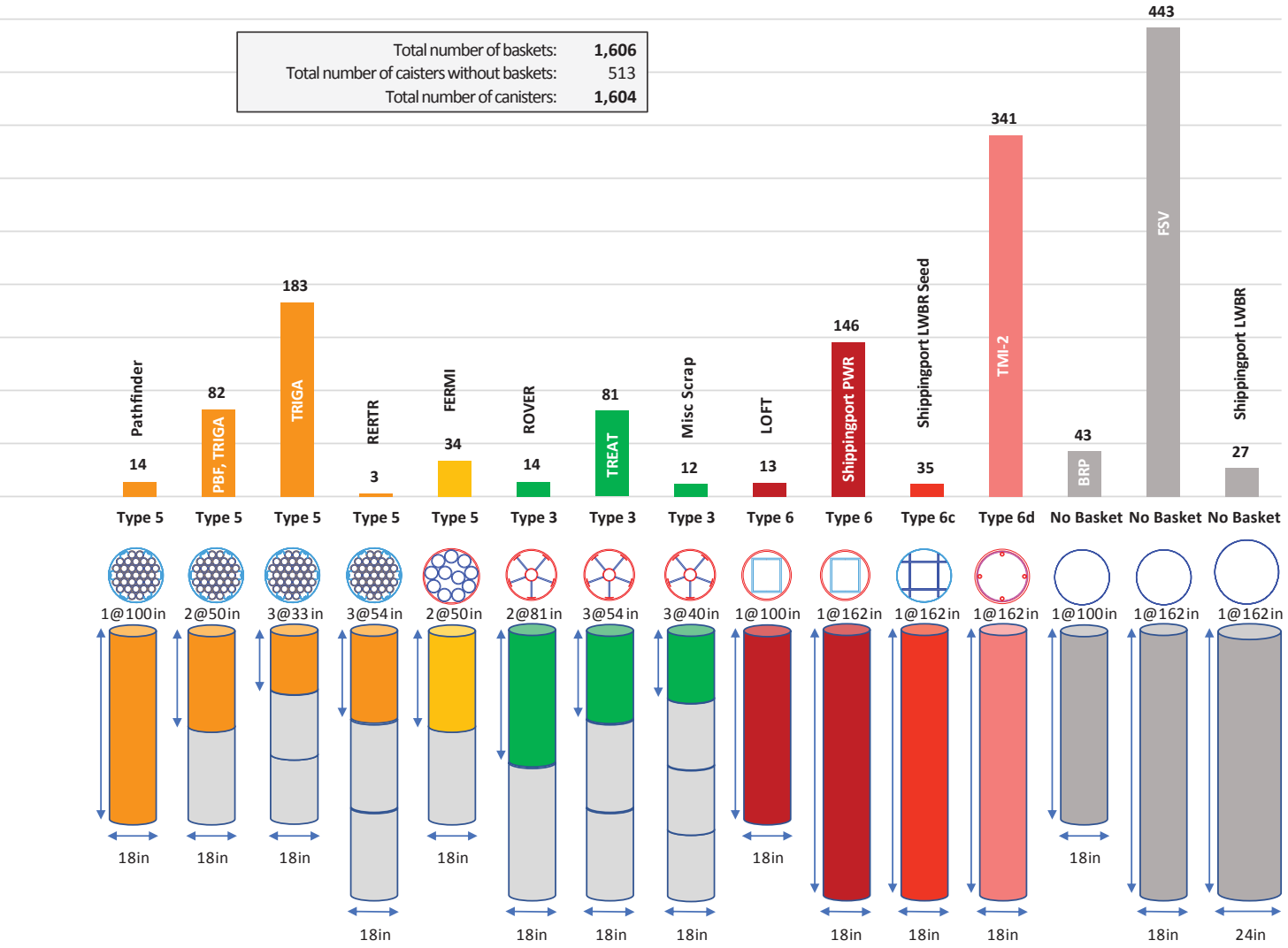
Fig. 5. Detailed estimated basket and canister loading information for INL using the mixing scenario.



Fuel Radionuclide Inventory Worksheet

I. Fuel and Template Information

Fuel Name:	PEACH BOTTOM UNIT I CORE I	[1]Fuel decay start date:	1969
SNF ID #:	170	Estimates as of:	2030
Fuel Units & Descr:	814 - ELEMENT	Template:	FSV (Graphite, Graphite, 60 to 100%, Th & U)
Heavy Metal Mass:	BOL=1707.4kg; EOL=1646.467kg	[2]Template Burnup(MWd):	1270.275
ROD Storage Site:		Template BOL Heavy Metal Mass (MT):	0.012702752
		Template Decay Time:	61 years

II. Estimates

	m	x_n	x_b	b	y_n	y_b
Radionuclide	Ci/MWd From Template	Nominal Fuel Burnup (MWd)[2]	Bounding Fuel Burnup (MWd)[2]	Initial Activity (Ci)	Nominal Fuel Inventories(Ci)	Bounding Fuel Inventories(Ci)
Ac-227	4.1532E-06	57,626.085	115,252.169	0.00E+00	2.39E-01	4.79E-01
Am-241	3.1974E-03	57,626.085	115,252.169	0.00E+00	1.84E+02	3.69E+02
Am-242m	2.0868E-06	57,626.085	115,252.169	0.00E+00	1.20E-01	2.41E-01
Am-243	4.5960E-05	57,626.085	115,252.169	0.00E+00	2.65E+00	5.30E+00
C-14	2.3050E-05	57,626.085	115,252.169	0.00E+00	1.33E+00	2.66E+00
Cl-36	1.0666E-06	57,626.085	115,252.169	0.00E+00	6.15E-02	1.23E-01
Cm-243	1.3854E-05	57,626.085	115,252.169	0.00E+00	7.98E-01	1.60E+00
Cm-244	2.3820E-03	57,626.085	115,252.169	0.00E+00	1.37E+02	2.75E+02
Co-60	1.4745E-05	57,626.085	115,252.169	0.00E+00	8.50E-01	1.70E+00
Cs-134	6.2665E-09	57,626.085	115,252.169	0.00E+00	3.61E-04	7.22E-04
Cs-135	2.4711E-05	57,626.085	115,252.169	0.00E+00	1.42E+00	2.85E+00
Cs-137	7.3053E-01	57,626.085	115,252.169	0.00E+00	4.21E+04	8.42E+04
Eu-154	1.9319E-03	57,626.085	115,252.169	0.00E+00	1.11E+02	2.23E+02
Eu-155	1.9571E-05	57,626.085	115,252.169	0.00E+00	1.13E+00	2.26E+00
Fe-55	9.5424E-11	57,626.085	115,252.169	0.00E+00	5.50E-06	1.10E-05
H-3	9.0152E-04	57,626.085	115,252.169	0.00E+00	5.20E+01	1.04E+02
I-129	1.0092E-06	57,626.085	115,252.169	0.00E+00	5.82E-02	1.16E-01
Kr-85	7.4429E-03	57,626.085	115,252.169	0.00E+00	4.29E+02	8.58E+02
Np-237	1.2557E-05	57,626.085	115,252.169	0.00E+00	7.24E-01	1.45E+00
Pa-231	4.7354E-06	57,626.085	115,252.169	0.00E+00	2.73E-01	5.46E-01
Pb-210	2.0344E-09	57,626.085	115,252.169	0.00E+00	1.17E-04	2.34E-04
Pm-147	1.5709E-07	57,626.085	115,252.169	0.00E+00	9.05E-03	1.81E-02
Pu-238	1.3228E-01	57,626.085	115,252.169	0.00E+00	7.62E+03	1.52E+04
Pu-239	1.3570E-04	57,626.085	115,252.169	0.00E+00	7.82E+00	1.56E+01
Pu-240	2.7460E-04	57,626.085	115,252.169	0.00E+00	1.58E+01	3.16E+01
Pu-241	5.4207E-03	57,626.085	115,252.169	0.00E+00	3.12E+02	6.25E+02
Pu-242	3.8864E-06	57,626.085	115,252.169	0.00E+00	2.24E-01	4.48E-01
Ra-226	3.8757E-09	57,626.085	115,252.169	0.00E+00	2.23E-04	4.47E-04
Ra-228	9.1929E-07	57,626.085	115,252.169	0.00E+00	5.30E-02	1.06E-01
Ru-106	8.7709E-19	57,626.085	115,252.169	0.00E+00	5.05E-14	1.01E-13
Se-79	2.1079E-05	57,626.085	115,252.169	0.00E+00	1.21E+00	2.43E+00
Sn-126	2.2196E-05	57,626.085	115,252.169	0.00E+00	1.28E+00	2.56E+00
Sr-90	6.7149E-01	57,626.085	115,252.169	0.00E+00	3.87E+04	7.74E+04
Tc-99	3.3325E-04	57,626.085	115,252.169	0.00E+00	1.92E+01	3.84E+01
Th-229	1.2935E-05	57,626.085	115,252.169	0.00E+00	7.45E-01	1.49E+00
Th-230	2.2337E-07	57,626.085	115,252.169	0.00E+00	1.29E-02	2.57E-02
Th-232	-6.9673E-08	57,626.085	0.000	1.69E-01	1.65E-01	1.69E-01
Tl-208	4.5475E-04	57,626.085	115,252.169	0.00E+00	2.62E+01	5.24E+01
U-232	1.2248E-03	57,626.085	115,252.169	0.00E+00	7.06E+01	1.41E+02
U-233	2.0605E-03	57,626.085	115,252.169	0.00E+00	1.19E+02	2.37E+02
U-234	2.9390E-04	57,626.085	115,252.169	0.00E+00	1.69E+01	3.39E+01
U-235	-1.7343E-06	57,626.085	0.000	3.38E-01	2.38E-01	3.38E-01
U-236	8.6285E-06	57,626.085	115,252.169	0.00E+00	4.97E-01	9.94E-01
U-238	-5.6065E-09	57,626.085	0.000	3.36E-03	3.04E-03	3.36E-03
Y-90	6.7166E-01	57,626.085	115,252.169	0.00E+00	3.87E+04	7.74E+04
Other Radionuclides					4.07E+04	8.13E+04
				Sum:	1.69E+05	3.39E+05

Gamma Sources

Photon Energy Group	Total Photons/sec (bounding)
Avg. MeV	
0.0150	4.320E+15
0.0250	8.785E+14
0.0375	7.659E+14
0.0575	8.244E+14
0.0850	4.971E+14
0.1250	3.240E+14
0.2250	4.300E+14
0.3750	1.862E+14
0.5750	3.139E+15
0.8500	3.505E+13
1.2500	1.451E+13
1.7500	1.089E+12
2.2500	9.533E+07
2.7500	1.840E+12
3.5000	4.811E+06
5.0000	2.045E+06
7.0000	2.342E+05
11.0000	2.680E+04

Thermal Power

Nominal Heat Output (Watts)	Bounding Heat Output (Watts)
7.50E+02	1.50E+03
Total	Total

III. Template Selection Summary, Burnup Summary, and Checks

Template Selection Summary

	From SFD	Used
Reactor Moderator:	GRAPHITE	GRAPHITE
Fuel Cladding:	GRAPHITE	GRAPHITE
BOL HM Constituents:	Th and U	Th and U
BOL Enrichment %:	93.1525882	60 to 100

Burnup Summary (MWd)[2]

	From SFD	Estimated	Basis for burnup used in estimate:
Nominal:		57,626.085	Nominal burnup calculated from the heavy metal mass destroyed.
Bounding:	52,579.383	115,252.169	Bounding burnup assumed to be twice nominal burnup.

Checks

	Burnup Multiplier	Estimated Burnup/ Given Burnup	Estimated EOL HM/Given EOL HM
Nominal:	0.34		1.00
Bounding:	0.68	2.19	

[1]Reactor shutdown, core removal, storage, shipping or other date confirming that irradiation ceased for fuel.
[2]Total burnup for all fuel associated with this worksheet must be divided by BOL heavy metal mass to get specific burnup values (MWd/MT).

Fig. 6. Example radionuclide inventory.

Radionuclide inventories

The SFD also estimates the radionuclide inventory [5] associated with each spent fuel record, as described earlier. An example of the output generated by the SFD for an individual fuel record is shown in Fig. 6. The example inventory consists of 814 fuel elements that were removed from a reactor in 1969. The selected estimate date is 2030 for this example, reflecting a decay time of approximately 61 years.

As a new feature in the latest version of the SFD, the user can now select the estimate year. Previously, the estimate years were hardwired to 2010 and 2030, based on formerly presumed pre- and post-closure time frames for the Yucca Mountain pre-closure operations.

The radionuclide inventory estimate is based on a linear scaling model (y = mx + b), where m is the radionuclide inventory per unit burnup (Ci/MWd), and b is the initial radionuclide inventory (Ci). Both m and b are imported from a template selected to reasonably represent the specific fuel and its burnup response. These parameters are seen as columns in the report in Fig. 6. The radionuclide inventory estimates are further scaled to account for the quantity of fuel based on end-of-life mass. A detailed discussion of the accuracy and uncertainty of this estimate model is included in Appendix E of *Source Term Estimates for DOE Spent Nuclear Fuels* [5].

The nominal curie values are meant to be an average value, based on average burnup. The bounding inventories are designed to estimate maximum values that could be expected based on variation in burnup within the elements in the fuel record (i.e., to account for variation in burnup radially across the core and axially along the fuel elements).

A photon-energy grouping is calculated for each of the 18 energy groups shown in Fig. 6 by multiplying the curie value of each radionuclide by the respective photon/second/Ci value. These values are useful for shielding calculations.

Decay heat is calculated by multiplying each radionuclide by the respective W/Ci heat-generation value and then summing all values to get total watts. Decay-heat information is useful for storage, transportation, and disposal planning. The SFD is used to provide annual data updates for the DOE report *Spent Nuclear Fuel and Reprocessing Waste Inventory* [8]. This report is sponsored by the DOE's Office of Spent Fuel and Waste Disposition and provides information on the inventory of commercial and non-commercial spent nuclear fuel and high-level waste in the United States.

One of the tables in this DOE report comes directly from the SFD and is shown in Table 2.

Table 2. Non-commercial SNF canister estimated decay heat in 2030.

Decay heat per canister (watts)	Number of canisters	Cumulative %
<50	1,134	44.9%
50 - 100	492	64.4%
100 - 200	675	91.1%
220 - 300	105	95.2%
300 - 500	96	99.0%
500 - 1000	15	99.6%
1000 - 1500	3	99.7%
1500 - 2000	1	99.7%
>2000	7	100.0%
Total	**2,524**	

For the current estimated loadings, the 2030 data indicate that more than 60 percent of the predicted DOE spent fuel canisters will be generating less than 100 W of decay heat; about 95 percent will be generating less than 300 W of decay heat; and nearly all (about 99 percent) will be generating less than 500 W of decay heat.

When data needed for estimating radionuclide inventories are unavailable, conservative assumptions are used. For fuels without complete data, this results in estimating very high radionuclide inventories and, by extension, photon-emission spectra and decay heat for fuels without complete data. The SFD fuel radionuclide inventory worksheet (Fig. 6) is designed to provide enough information to allow the user to evaluate the basis, uncertainty, and bias within the estimate.

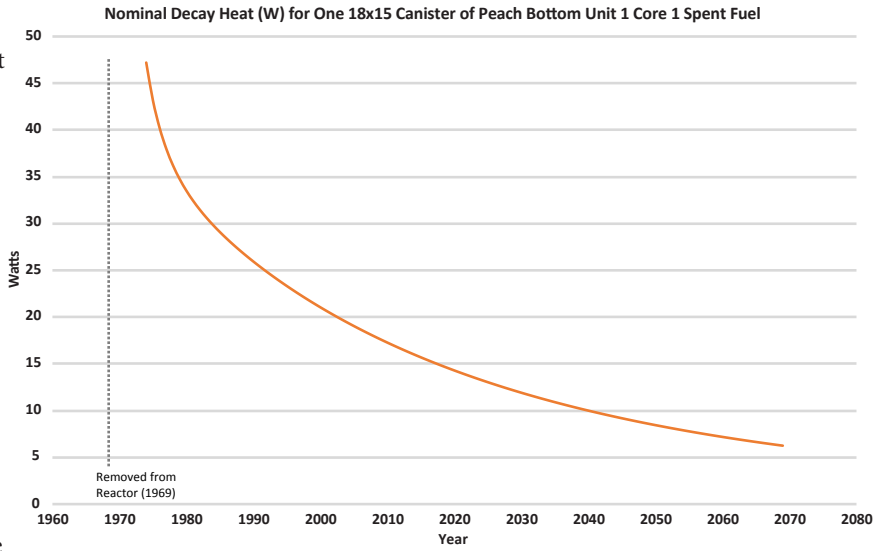


Fig. 7. Decay heat of Peach Bottom spent fuel in one 18 x 15 canister over time.

The SFD can estimate radionuclide inventory by year out to 100 years after discharge from a reactor and calculate a plot of decay heat for each of those years. As an example, Fig. 7 shows decay heat for Peach Bottom spent fuel in an 18-in. × 15-ft. canister over a period of 100 years.

As we have seen, the SFD provides a centralized source of DOE-managed spent fuel data that has proven useful to DOE site engineers and managers, DOE staff and leadership, and congressional staff and oversight boards, among others. It is anticipated that SFD data will continue to be used for planning and analyses related to the management and disposal of DOE spent fuel for the full range of potential future scenarios.

References

1. U.S. DOE, *United States Department of Energy's Record of Decision for Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs*, DOE/EIS-0203, DOE (June 1995).
2. U.S. DOE, *Sixth National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management*, IAEA (Oct. 2017).
3. Peterson, J., et al., "UNF-ST&DARDS Unified Database and the Automatic Document Generator," *Nuclear Technology*, 199, 3, 310 (2017).
4. Wahnschaffe, S., *Preliminary DOE-owned Spent Nuclear Fuel Descriptions and Disposition*, DOE/SNF/REP-114, Rev. 0, Idaho National Laboratory (Sept. 2011).
5. Pincock, L.F., *Source Term Estimates for DOE Spent Nuclear Fuels*, DOE/SNF/REP-078, Rev. 2, Idaho National Laboratory (Apr. 2008).
6. Petersen, G.M., et al., *History and Status of DOEs Standardized Canister*, INL/CON-18-51893, Rev. 0, Idaho National Laboratory (Mar. 2019).
7. Lorenz, B.D., *Multi Canister Overpack (MCO) Topical Report*, HNF-SD-SNFSARR-005, Rev. 2, Department of Energy (May 2000).
8. Peters, S., D. Vinson, J.T. Carter, *Spent Nuclear Fuel and Reprocessing Waste Inventory*, FCRD-NFST- 2013-000263, Rev. 7, Savannah River National Laboratory (Sept. 2020).

Layne Pincock is a systems engineer at Idaho National Laboratory involved in the management of DOE-owned spent nuclear fuel; and Brett Carlsen is an INL research engineer involved in fuel cycle research and development.

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Index to Categories

The following categories are included in Section I of the Buyers Guide, "Products, Materials & Services Directory," which begins on page 79. Categories are listed there in alphabetical order, and each category is identified with a code number—for example, "Absorbers, Nuclear Radiation," code number 00400; "Work Platforms," 96200. Section II, the "Directory of Suppliers," begins on page 125 and provides the phone numbers and contacts of the companies listed in Section I. Extensive cross references are included here, but not in Section I.

D

E

F

R

S

Over 40 Years of Nuclear HVAC Experience

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

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HVAC SYSTEM COMPONENTS

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

HVAC SYSTEM COMPONENTS

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

QUALITY CERTIFICATIONS

NQA-1
ASME AG-1
10CFR50 Appendix B
ASME R, S, U
AWS

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Matt Gorman mgorman@ssmi.biz
3401 Grand Avenue, Pittsburgh, PA 15225
412-901-1467 cell / 412-777-5101 office

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(412) 777-5101 • ssmi.biz

Radwaste Solutions

2021 Buyers Guide

Nearly 500 companies listed throughout 173 categories of products and services utilized by the nuclear industry

00300 Abrasives–*also see Cleaning Equipment*

B Bonded
C Coated
LP Lapping & Polishing Grits
NW Non-Woven Fiber

EFCO USA, Inc., Charlotte, NC (LP)
Free Form Fibers, Saratoga Springs, NY (LP, NW)
Springs Advanced Technology Group (ATG), LLC, Westminster, CO (C)

00400 Absorbers, Nuclear Radiation–*also see Neutron Absorbers; Sorbents*

Ellis & Watts Global Industries, Inc., Batavia, OH
Framatome Inc., (North American Headquarters), Lynchburg, VA
Hopewell Designs, Inc., Alpharetta, GA
ISOFLEX USA, San Francisco, CA
METOIL, Praha, Czech Republic
Roberts Engineering Services, Inc., Stuart, FL
Westinghouse Electric Co. LLC, Cranberry Township, PA

03000 Air-Conditioning & Ventilation Equip.–*also see Dampers; Filter Housings; Filters; Training*

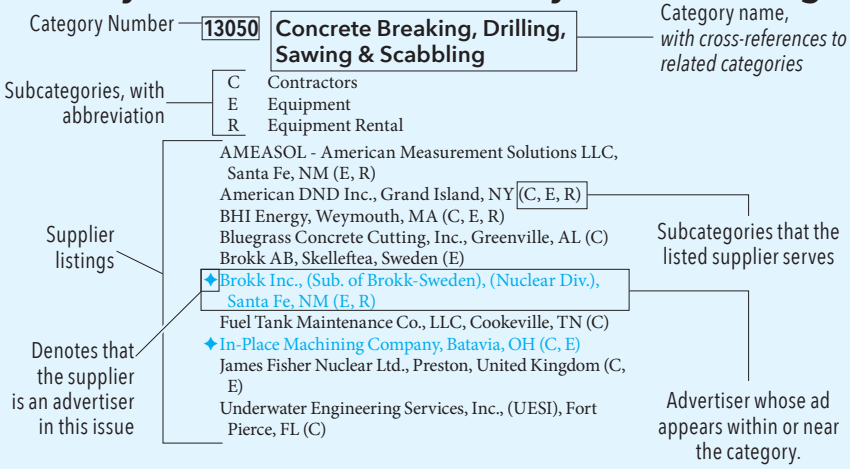
AC Air-Conditioning
AN Air Distribution Nozzles
AD Air Dryers
AF Air Filtration Units
AH Air Handling
C Chillers
CO Condensing Units
DH Dehumidifiers
D Ductwork
EC Evaporative Coolers
F Fans & Blowers
L Louvers
V Ventilation
VP Ventilation, Portable
VT Ventilation, Test Equipment

Artisan Industries Inc., Stoughton, MA (C, CO)
BHI Energy, Weymouth, MA (V, VP)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (AC, AN, AD, AF, AH, C, CO, DH, D, EC, F, L, V)
DC Fabricators Inc., Florence, NJ (CO)
ECU Corporation, Cincinnati, OH (AC, AD, AF, AH, C, CO, DH, F, L, V, VP)
Ellis & Watts Global Industries, Inc., Batavia, OH (AC, AD, AF, AH, C, CO, DH, D, EC, F, L, V, VP)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (AC)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, V)
Frham Safety Products, Inc., Nashville, TN (AD, AF)
New York Blower Company, Willowbrook, IL (AH, F, V)
NuSource LLC, Alexandria, VA (AD, AF, AH, C, CO, F)
Paragon Energy Solutions, Fort Worth, TX (AC, AF, C, EC, F, V)

This section contains an alphabetical listing of nuclear products, materials, and services, with the companies that supply these items. Exactly 173 categories are included (see "Index to Categories," pp. 72–77). Extensive cross references are not included in this section, but can be found in the Index to Categories.

The supplier listings in each category are based on annual updates made by the individual companies to their online verification forms. Nearly 500 companies are represented throughout these pages. Those companies whose names are preceded by a diamond (✦) have an advertisement in the 2021 *Radwaste Solutions* Buyers Guide. Companies highlighted in blue have an advertisement within or near that category.

Anatomy of a *Radwaste Solutions* Buyers Guide listing



PMT Nuclear, Woodridge, IL (AC, AN, AD, AF, AH, C, CO, DH, D, EC, F, L, V, VP)
Springs Advanced Technology Group (ATG), LLC, Westminster, CO (AH)
SPX Cooling Technologies, Inc., Overland Park, KS (EC, F, L)
✦SSM Industries, Inc., Pittsburgh, PA (AC, AD, AF, AH, C, CO, DH, D, EC, F, L, V)
See advertisement on page 78
Super Radiator Coils, Chaska, MN (AC)
TEiC, Duncan, SC (C)
Unified Engineering, Hamilton, Ontario, Canada (L)
Vigor (formerly Oregon Iron Works), Clackamas, OR (EC)

03180 Alarm Status Reporting & Control Systems

Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID
Mirion Technologies, Inc., Atlanta, GA
Power System Sentinel Technologies, LLC, Warrior, AL
Radiation Safety & Control Services, Inc., Seabrook, NH
Rolls-Royce Civil Nuclear, Warrington, United Kingdom
Westinghouse Electric Co. LLC, Cranberry Township, PA

03200 Alarm Systems–*also see Emergency Warning Systems; Security Systems*

AI Anti-Intrusion
AS Audible Signal
C Criticality
F Fire
FR Flow Rate
LE Level
LI Limit
P Pressure
R Radiation
RT Reactivity Transient
RV Recorded Voice, Digital (Multiple Messages)
V Visual Signal

Acromag Inc., Wixom, MI (LE, LI, P)
Alison Control Inc., Fairfield, NJ (F)
CAEN SyS, Viareggio, LU, Italy (R)
FCI-Fluid Components International LLC, San Marcos, CA (FR, LE)
Framatome Inc., (North American Headquarters), Lynchburg, VA (F, LE, R, RT)
General Atomics Electromagnetic Systems, San Diego, CA (R)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (FR, LE, LI, P, R, RT)
Hoskin Scientific, Oakville, Ontario, Canada (FR, LE, LI, P)
Intek, Inc., Westerville, OH (FR)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (C)
KROHNE, Inc., Beverly, MA (FR, LE, P)
LabLogic Systems, Inc., Tampa, FL (R)
Magnetrol International, Aurora, IL (LE)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (R)
Mirion Technologies, Inc., Atlanta, GA (R)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (FR, LE, LI, P)
NuclearConsultants.com, Ann Arbor, MI (C)
ORTEC, Oak Ridge, TN (R)
Overhoff Technology Corp., (A Div. of US Nuclear Corp.), Milford, OH (R)
Paschal Solutions, Inc., Knoxville, KY (C)
Premium Analyse, Norroy Le Veneur, France (R)
PSC Vodec, Nottingham, United Kingdom (AS, C, RV, V)
Pylon Electronics Inc., (Div. of Autrex) (Instrumentation Dept.), Ottawa, Ontario, Canada (R)
Radiation Safety & Control Services, Inc., Seabrook, NH (R)
Rockwell Automation, Inc., Milwaukee, WI (FR, LE, LI, P)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AI, AS, C, F, FR, LE, LI, P, R, RT, RV, V)
Rosemount Nuclear Instruments, Inc., Chanhassen, MN (FR, LE, P)
Technology for Energy Corp., Knoxville, TN (AS, FR, V)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (R)
Westinghouse Electric Co. LLC, Cranberry Township, PA (RT)
Yokogawa Corporation of America, Newnan, GA (FR, LE, LI, P)

03800 Analysis

C Chemical
DE Design Basis
DD Due Diligence
EL Elemental, Isotopic
E Environmental
EQ Equipment Qualification
FE Failure, Electrical/Electronic
FM Failure, Metallurgical
FI Finite Element
FP Fuel Cycle & Fuel Performance
G Geotechnical
GM Groundwater Modeling
HE Helium
H Hydrological
LA Laser-Based
LP Loose Parts
L Lubrication
M Materials
RS Risk
SE Seismic
SH Shielding
SC Site Characterization
SI Siting
ST Stress
SS Sump/Strainer Blockage (Reg. Guide 1.82)
T Thermal
V Vibration
W Waste

Advanced Consulting Group, Inc., Chicago, IL (ST)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (EL, M, SC, W)
Analysis and Measurement Services Corp. (AMS), (Including CHAR Services), Knoxville, TN (EQ, FE, SC)
Anamet, (a Div. of Acuren Inspection, Inc.), Hayward, CA (C, FM, M)
F.N. Anderson & Assoc., Forest, VA (EL, E, EQ, FI, FP, SH, ST)
Anvil International, LLC, North Kingstown, RI
Applied Analysis Corp., Reading, PA (DE, EQ, SH, SI, T)
Applied Science Professionals, LLC, (ASP-LLC), Salt Lake City, UT (SC)
✦Attention IT, Inc., Knoxville, TN (E)
Attenuation Environmental Co., Seattle, WA (E, W)
Bevelacqua Resources, Richland, WA (E, RS, SH)
Black & Veatch, Overland Park, KS (C, DE, DD, E, EQ, G, H, RS, SE, SH, SC, SI, ST, T)
Boston Government Services, LLC (BGS), Oak Ridge, TN (DE, EQ, FE, FI, RS, ST, T)
Burns & McDonnell, Kansas City, MO (DE, DD, E, EQ, FE, FM, FI, G, H, M, SE, SH, SC, SI, ST, SS, T, V, W)
BWX Technologies, Inc., Lynchburg, VA (C, EL, E, FE, FM, FI, FP, M, SH, ST, T, V, W)
Cabrera Services Inc., East Hartford, CT (EL, H, M, RS, SC)
CAEN SyS, Viareggio, LU, Italy (E, FP, W)
✦Container Technologies Industries, LLC, Helenwood, TN (M, RS, ST)
CS-2 Inc., Grand Island, NY (E, RS, SC, T, W)
CTR Technical Services, Inc., Manitou Springs, CO (RS, SH)
Curie Environmental Services, Albuquerque, NM (W)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (DE, L, RS, SE)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (EL, T)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (DE, E, EQ, SE, SH, ST, V)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (C, DD, EQ, FI, FP, M, RS, SE, SH, SC, ST, T, V)
DCS Systems, Inc., Simsbury, CT (FP)
Decidia Research & Consulting, Sabadell, Barcelona, Spain (E, RS, SI)
The Delphi Groupe, Inc., Austin, TX (E, RS)
Deytec, Inc., Ashburn, VA (RS)
Dominion Engineering, Inc., Reston, VA (C, FM, FI, M, SE, ST, W)
Dufrane Nuclear Shielding Inc., Winsted, CT (SH, W)
ECU Corporation, Cincinnati, OH (FI, SE)
Elcometer Inc., Warren, MI (E)
Electric Motor and Contracting Company Inc., Chesapeake, VA (DD, FE, V)
Elysium Industries USA, New York, NY (FP)
Enercon Services, Inc., (Talisman Div.), Kennesaw, GA (E, RS, SI, W)
Energy Resources International Inc., Washington, DC (FP, W)
✦EnergySolutions LLC, Salt Lake City, UT (C, DE, EL, FM, M, RS, SE, SH, SC, SI, ST, T, V, W)
Energy Steel, Lapeer, MI (C, DE, EQ, FE, FM, FP, LP, L, M, RS, SE, SH, ST, SS, T, V)
Engineering Planning and Management, Inc., Framingham, MA (DE, DD, EQ, RS)
ETAP - Operation Technology, Inc., Irvine, CA (DD)
EXCEL Services Corporation, Rockville, MD (DE, E, EQ, FI, FP, RS, SH, SI, T)
Exelon PowerLabs, Coatesville, PA (C, EL, E, EQ, FE, FM, M)
Fluor, Arlington, VA (DE, E, RS)
Fortum Power & Heat Oy, Nuclear Services, Espoo, Finland, Finland (E, FP, M, RS, SE, SH, ST, SS, T)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, DE, DD, EL, E, EQ, FE, FM, FI, FP, LP, M, RS, SE, SH, SC, ST, SS, T, V, W)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (FP)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (E)
GEL Solutions, LLC, (A Member of The GEL Group, Inc.), Charleston, SC (SE)
General Atomics Electromagnetic Systems, San Diego, CA (EQ)
Gen IV Nuclear Energy Systems Services, Rockville, MD (DE, FP, RS)
Geovariances, Avon, France (E, G, GM, H, RS, SC)
GoldSim Technology Group, Seattle, WA (RS)
GSE DP, (DP Engineering), Fort Worth, TX (DE, DD, E, EQ, FE, FM, FP, RS, ST, T, V, W)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (EQ, SE)
✦Holtec International, Camden, NJ (EQ, SE, SH, ST, T, V)
Hoskin Scientific, Oakville, Ontario, Canada (E, G, ST, T)
Idom Consulting, Engineering, Architecture S.A.U., Bilbao, Spain (DE, DD, FI, G, M, SE, SH, SC, ST, T)
ILD, Inc., Baton Rouge, LA (SE, T, V)
Imperia Engineering Partners LLC, Bordentown, NJ (DE, DD, E, EQ, FE, FM, FI, M, RS, SE, SI, ST, SS, T, V)
INGEROP Conseil et Ingenierie, (a company of INGEROP Group), Cebazat, France (FI, G, SC)

Interdevelopment, Inc., Falls Church, VA (RS)
ISOFLEX USA, San Francisco, CA (EL, FP)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (EL, SH)
✦Joseph Oat Corp., Camden, NJ (H, M, ST, T, V)
Kinectrics Inc., Toronto, Ontario, Canada (C, DE, DD, EL, E, EQ, FE, FM, FP, H, LP, L, M, RS, SE, SH, ST, T, V, W)
Kinemetrics, Inc., Pasadena, CA (SE)
LabLogic Systems, Inc., Tampa, FL (SH)
Lambda Technologies, Cincinnati, OH (FM, FI, ST)
Liburdi Automation Inc., Dundas, Ontario, Canada (FM)
Lucideon, Durham, NC (C, DE, EL, FM, FI, M, T)
LUDECA, Inc., Doral, FL (V)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (M, W)
Materials and Chemistry Laboratory, Inc., (MCLinc), Oak Ridge, TN (C, EL, E, FM, M, W)
Matom Ltd., North Wales, United Kingdom (DE, EL, FM, M, SC)
Mega-Tech Services, LLC, Cooksburg, PA (RS)
MillenniTEK, LLC, Knoxville, TN (C, EQ, SH)
Mirion Technologies, Inc., Atlanta, GA (SH, W)
✦NAC International Inc., Peachtree Corners, GA (FP, SH, ST, T)
NAC LPT LLC, Sewickley, PA (E, SC, W)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (EQ, FI, M, T)
Navarro Research and Engineering, Inc., Oak Ridge, TN (DE, DD, E, GM, H, RS, SC, W)
Netzsch Instruments North America LLC, Burlington, MA (C, EL, FP, ST, T)
North GeoEngineering Services, LLC, Albuquerque, NM (G, GM, SE, SC)
North Wind Group, Idaho Falls, ID (E, GM, SC, SI, W)
NovaTech, Lynchburg, VA (DE, EQ, FI, FP, LP)
NuclearConsultants.com, Ann Arbor, MI (FP, SH)
NuSource LLC, Alexandria, VA (DE, FI, SE, T)
NV5/Dade Moeller, Richland, WA (DD, G, H, SH)
✦Orano Federal Services, Charlotte, NC (DE, EQ, FP, SE, SH, SC, SI)
ORTEC, Oak Ridge, TN (EL, E, SC, W)
Paragon Energy Solutions, Fort Worth, TX (SE)
PAR Systems, LLC, Shoreview, MN (EQ, SE)
Paschal Solutions, Inc., Knoxville, KY (DE, SH)
Pioneer Motor Bearing Co., Kings Mountain, NC (V)
Platom Oy, Mikkeli, Finland
PMT Nuclear, Woodridge, IL (FI, SE, SH)
Power & Energy Systems Services, Oradell, NJ (T)
Power System Sentinel Technologies, LLC, Warrior, AL (DD, EQ, FE)
✦Precision Custom Components, LLC, York, PA (FM, ST, T, V)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (C, FI, M, SE)
Promation Nuclear, Oakville, Ontario, Canada (DE, EQ, FE, FI, M, RS, SE, SH, ST, T, W)
Radiation Safety & Control Services, Inc., Seabrook, NH (EL, E, G, W)
Red Wolf Associates, Cary, NC (C, DE, EL, EQ, FI, RS, SH, ST, SS, T)
REEL COH Inc., Boisbriand, Quebec, Canada (SE)
R&G Laboratories, Inc., Tampa, FL (C, L)
Right Brain Sekurity, Oswego, IL (RS)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (EQ)
Sargent & Lundy, Chicago, IL (C, DE, DD, E, EQ, FE, FM, FI, G, H, LP, L, M, RS, SE, SH, SC, SI, ST, SS, T, V, W)
Schulz Electric, Timken Power Systems, New Haven, CT (EQ, FE, M, SE, V)
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (L, V)
SIET, Piacenza, Italy (EQ, T, V)
Simpson Gumpertz & Heger (SGH), Chicago, IL (DE, DD, EQ, FM, FI, G, H, M, RS, SE, SC, ST, T, V)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (FI, SE, ST)
Southwest Research Institute, San Antonio, TX (C, EL, E, EQ, FE, FM, FI, G, GM, H, L, M, RS, SE, SH, SC, SI, ST, SS, T, V, W)
✦SSM Industries, Inc., Pittsburgh, PA (SE)
Structural Integrity Assoc., Inc., San Jose, CA (FM, FI, SE, ST, V)
Talisman Div. of Enercon, Arlington, VA (DD, E, RS, SC, SI, W)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (E, SC, W)
Thermal Engineering International (TEi), Cerritos, CA (T, V)
Unified Engineering, Hamilton, Ontario, Canada (FI, H)
Unique Technical Resources, Wayne, PA (DE, DD, EQ)
UxC, LLC, Roswell, GA (FP)
Volian Enterprises, Inc., Murrysville, PA (EQ, T)
Warrington, Inc., Pflugerville, TX (FP)
Westinghouse Electric Co. LLC, Cranberry Township, PA (C, DE, EL, E, EQ, FE, FI, FP, H, LP, L, M, RS, SE, SH, ST, T, V, W)
✦WMG, Inc., Peekskill, NY (EL, SH, SC, W)

04000 Analyzers

A Air
CA Coincidence & Anti-Coincidence
D Density
DH Dissolved Hydrogen
DO Dissolved Oxygen
E Effluent
G Gas
CG Gas, Containment
H Hydrazine
MP Multi-Parameter
OG Off-Gas Hydrogen
OX Oxygen
PO Portable Multichannel
PA Post-Accident Sampling (O2 & H2)
PM Pulse-Height, Multi-Channel
PH Phosphorescence
PS Pulse-Height, Single-Channel
SI Silica
SL Sludge
SO Sodium
ST Steam
TF Time-of-Flight
TO Total Organic Carbon
V Viscosity
WG Waste-Gas, Oxygen & Hydrogen
W Water

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (PO, SL)
Automation Products, Inc., (Dynatrol® Div.), Houston, TX (D, V, W)
AVANTech, LLC, Knoxville, TN (DO, E, OX, SI, SO, W)
AVANTech, LLC, Columbia, SC (DO, E, OX, SI, SO, W)
Bot Engineering Ltd, Campbellville, Ontario, Canada (A, CA, D, E, G, CG, PO, PM, PS, TO, W)
CAEN SyS, Viareggio, LU, Italy (CA, E, PO, PS, SL, TF)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (MP)
Elcometer Inc., Warren, MI (V)
✦EnergySolutions LLC, Salt Lake City, UT (SL, W)
Framatome Inc., (North American Headquarters), Lynchburg, VA (OG, SL)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (A, DO, E, G, CG, W)
HI-Q Environmental Products Co., Inc., San Diego, CA (A)
Hoskin Scientific, Oakville, Ontario, Canada (DO, V)
LabLogic Systems, Inc., Tampa, FL (W)
LND, Inc., Oceanside, NY (CA, MP)
Ludlum Measurements, Inc., Sweetwater, TX (PS)
✦M. Braun Inc., Stratham, NH (OX, W)
Mirion Technologies, Inc., Atlanta, GA (A, E, G, PS, ST, W)
Mound Technical Solutions, Inc., Miamisburg, OH (A, G, CG)
Netzsch Instruments North America LLC, Burlington, MA (G)
NUCON International, Inc., Columbus, OH (G)
ORTEC, Oak Ridge, TN (CA, E, MP, PO, PM, PS)
Radiation Safety & Control Services, Inc., Seabrook, NH (PO, PM)
Radiological Solutions Inc., Rockdale, IL (W)
REEL COH Inc., Boisbriand, Quebec, Canada (G)
Sentry Equipment, Oconomowoc, WI (DO, H, OX, PA, SI, SO, ST, W)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (CG, OG, OX, PA, TO, WG)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (A, E, PM, PS, W)
VTT Technical Research Centre of Finland, VTT, Finland (A, E, G, CG, MP, PA, PH, SI, SL, SO, TO, V, WG, W)
Warrington, Inc., Pflugerville, TX (PO, PM)
Yokogawa Corporation of America, Newnan, GA (D, DO, E, OG, OX, PA, ST, TO, W)

06790 Asbestos Abatement/Removal Products & Services

Advanced Nuclear LLC, East Petersburg, PA
✦American DND Inc., Grand Island, NY
CS-2 Inc., Grand Island, NY
Fluor, Arlington, VA
Fuel Tank Maintenance Co., LLC, Cookeville, TN
North Wind Group, Idaho Falls, ID

06950 Bar-Coding Devices & Supplies

✦Attention IT, Inc., Knoxville, TN
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
InfoSight Corp., Chillicothe, OH
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada

08800 Cable, Electrical–*also see Connectors; Wire*

CO Coaxial
C Control
DC Data Communications
FI Fiber Optic
FR Flame-Resistant
HT High-Temperature
I Instrumentation
MI Mineral-Insulated, Metal-Jacketed
P Power
PA Prefabricated Assemblies
RR Radiation-Resistant
R Repair, In-Site
UC Umbilical Cord, Nuclear Grade (Robotic)
U Underwater

AVANTech, LLC, Knoxville, TN (C, DC, I, P)
AVANTech, LLC, Columbia, SC (C, DC, I, P)
Bot Engineering Ltd, Campbellville, Ontario, Canada (RR)
Cablelan Nuclear, Inc., Fort Myers, FL (C, DC, FI, FR, HT, I, P)
C.J. Enterprises, (Div. of C.J. Instruments, Inc.), Tarzana, CA (HT, RR)
CM Technologies Corp., Coraopolis, PA (I)
Coastel Cable Tools, Inc., East Syracuse, NY (CO, C, DC, P, RR)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (CO, C, FR, HT, I, MI, P, PA, RR, R)
Framatome Inc., (North American Headquarters), Lynchburg, VA (HT, I, MI, PA, RR)
Hoskin Scientific, Oakville, Ontario, Canada (C, I)
Kanata Electronic Services Ltd., Toronto, Ontario, Canada (I, PA, RR)
LEMO S.A., Ecublens, Switzerland (CO, DC)
Lights Camera Action, LLC, Gilbert, AZ (RR, U)
Mirion Technologies, Inc., Atlanta, GA (CO, C, FR, HT, I, MI, PA, RR)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (MI, PA, RR)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (RR)
Nu-Energy Technologies, Inc., Providence Forge, VA (CO, C, DC, FR, HT, U)
NuSource LLC, Alexandria, VA (CO, C, I)
PAR Systems, LLC, Shoreview, MN (RR, UC)
Promation Nuclear, Oakville, Ontario, Canada (CO, C, DC, FR, I, P, PA, RR, UC)
✦Reef Industries, Inc., Houston, TX (FR, PA)
Rolls-Royce Civil Nuclear SAS, Meylan, France (I)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (I)
Schulz Electric, Timken Power Systems, New Haven, CT (HT, RR)
Sidus Solutions LLC, San Diego, CA (UC, U)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (CO, C, DC, I, U)
VTT Technical Research Centre of Finland, VTT, Finland (C, DC, FI, FR, HT, I, RR)
Westinghouse Electric Co. LLC, Cranberry Township, PA (I, PA)

09730 Calciners–*also see Radioactive Waste Handling & Treatment Equipment*

Framatome Inc., (North American Headquarters), Lynchburg, VA
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA
✦Orano Federal Services, Charlotte, NC
✦Petersen Inc., Ogden, UT
Vigor (formerly Oregon Iron Works), Clackamas, OR
Wyssmont Co., Fort Lee, NJ

09750 Calibration Equipment & Systems

D Dose, Nuclear Medicine
E Electrical Test Equipment
ET Electrical Test Equipment
IC Instrumentation and Control
LF Laminar Flow
P Pressure
R Radiation Measuring

Bot Engineering Ltd, Campbellville, Ontario, Canada (IC, R)
Cabrera Services Inc., East Hartford, CT (R)
CM Technologies Corp., Coraopolis, PA (E, ET, IC)
Coastel Cable Tools, Inc., East Syracuse, NY (IC)
Exelon PowerLabs, Coatesville, PA (E, ET, IC, LF, P, R)
Framatome Inc., (North American Headquarters), Lynchburg, VA (D, IC, P, R)
General Atomics Electromagnetic Systems, San Diego, CA (IC, R)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (D, E, ET, IC, LF, P, R)
Hoskin Scientific, Oakville, Ontario, Canada (IC)
Mirion Technologies, Inc., Atlanta, GA (D, IC, R)
North Wind Group, Idaho Falls, ID (R)
ORTEC, Oak Ridge, TN (R)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (R)
Promation Nuclear, Oakville, Ontario, Canada (D, E, ET, IC, P)
RADeCO, Inc., Plainfield, CT (LF)
Rolls-Royce Civil Nuclear SAS, Meylan, France (IC, P)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (IC, P)
System One, Pittsburgh, PA (E, ET, IC)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (D, R)

09800 Calibration Services–*also see Health Physics Services*

E Electrical Test Equipment
ET Electronic Test Equipment
F Flow
IC Instrumentation & Control
PT Pressure, Temperature, Humidity
R Radiation Measuring
T Tools, Physical/Dimensional/Mechanical

Berkeley Nucleonics Corp., San Rafael, CA (ET)
Cabrera Services Inc., East Hartford, CT (R)
Coastel Cable Tools, Inc., East Syracuse, NY (ET)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (F)
✦EnergySolutions LLC, Salt Lake City, UT (IC, R)
Environmental Restoration Group, Inc., Albuquerque, NM (R)
Exelon PowerLabs, Coatesville, PA (E, ET, F, IC, PT, R, T)
FCI-Fluid Components International LLC, San Marcos, CA (F)

✦F&J SPECIALTY PRODUCTS, INC., Ocala, FL (F)
Framatome Inc., (North American Headquarters), Lynchburg, VA (E, ET, IC, PT, R, T)
General Atomics Electromagnetic Systems, San Diego, CA (ET, R)
Health Physics Instruments, (Div. of Far West Technology, Inc.), Goleta, CA (R)
HI-Q Environmental Products Co., Inc., San Diego, CA (F)
Hopewell Designs, Inc., Alpharetta, GA (R, T)
Hoskin Scientific, Oakville, Ontario, Canada (F, PT)
Kinectrics Inc., Toronto, Ontario, Canada (E, ET, IC)
Kinemetrics, Inc., Pasadena, CA (IC)
Mirion Technologies, Inc., Atlanta, GA (IC, R)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (E, ET, PT, T)
North Wind Group, Idaho Falls, ID (R)
Nuclear Technology Services, Inc., Roswell, GA (R)
NUCON International, Inc., Columbus, OH (E, ET, F, IC, PT, R, T)
ORTEC, Oak Ridge, TN (R)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (PT)
✦Precision Custom Components, LLC, York, PA (T)
Promation Nuclear, Oakville, Ontario, Canada (E, ET, IC, PT)
RADeCO, Inc., Plainfield, CT (F)
Radiation Safety & Control Services, Inc., Seabrook, NH (R)
Rolls-Royce Civil Nuclear SAS, Meylan, France (ET, F, IC, PT)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (ET, F, IC, PT)
RSO, Inc./Radiation Service Organization, Laurel, MD (R)
Sentry Equipment, Oconomowoc, WI (F, IC, PT, R)
SIET, Piacenza, Italy (E, ET, F, IC, PT, T)
Southwest Research Institute, San Antonio, TX (E, ET, F, IC, PT, R, T)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (R)
Warrington, Inc., Pflugerville, TX (R)
Westinghouse Electric Co. LLC, Cranberry Township, PA (T)

09950 Cars, Railroad

CH Cask-Handling
L Liners

AVANTech, LLC, Knoxville, TN (L)
AVANTech, LLC, Columbia, SC (L)
Dufrane Nuclear Shielding Inc., Winsted, CT (CH, L)
✦EnergySolutions LLC, Salt Lake City, UT (L)
✦I.C.E. Service Group, Inc., Moon Township, PA (CH, L)
✦Joseph Oat Corp., Camden, NJ (L)
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (CH)
NAC LPT LLC, Sewickley, PA (CH, L)
✦Orano Federal Services, Charlotte, NC (CH, L)
✦PacTec, Inc., Clinton, LA (L)
REEL COH Inc., Boisbriand, Quebec, Canada (CH)
Vigor (formerly Oregon Iron Works), Clackamas, OR (CH, L)
Wheelift Transporters, Waverly, IA (CH)

10780 Cleaning Equipment–*also see Decon. Chem. & Equip.; Health Phys. Equip.*

A Abrasive
CP Cavity Pool
CS Chemical Services
P Parts Washers
PC Pipe Cleaning
PW Pressure Washing
R Robotic
S Steam
TC Tube Cleaning
U Ultrasonic
UW Underwater
V Vacuum
VB Vacuum Blasting, Abrasive
WJ Water Jetting, High-Pressure
WA Water Jetting, High-Pressure, Abrasive

ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (R)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (R)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (R)
AVANTech, LLC, Knoxville, TN (CP, P, R, UW, V)
AVANTech, LLC, Columbia, SC (CP, P, R, UW, V)
BHI Energy, Weymouth, MA (A, PW, V, WJ)
Brokk AB, Skelleftea, Sweden (R)
Container Products Corp., Wilmington, NC (PW)
✦Container Technologies Industries, LLC, Helenwood, TN (A)
Day & Zimmermann, Philadelphia, PA (TC)
Deep Trekker, Kitchener, Ontario, Canada (R)
Desco Mfg. Co., Inc., Rancho Santa Margarita, CA (A, PC, PW, V)
Dominion Engineering, Inc., Reston, VA (U)
✦EnergySolutions LLC, Salt Lake City, UT (CP, V)
Environmental Alternatives, Inc., Swanzey, NH (A, CP, CS, PC, R, S, TC, U, V, VB, WJ)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, CP, CS, PC, PW, R, TC, U, UW, WJ, WA)
Frham Safety Products, Inc., Nashville, TN (V, VB)
Heat Exchanger Products Corp. (HEPCO), Hingham, MA (TC)
Hennigan Engineering LLC, Hingham, MA (PC, PW, TC, WJ, WA)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (R)
Master-Lee Engineered Products Inc., Latrobe, PA (V)
NovaTech, Lynchburg, VA (A, R, UW, V)
Nu-Energy Technologies, Inc., Providence Forge, VA (CP, CS, P, PC, TC)
NuVision-HWM, Pittsburgh, PA (R)
PAR Systems, LLC, Shoreview, MN (R, WJ, WA)
Powerfect Service, Inc., Brick, NJ (PW, S, TC)
✦Precision Custom Components, LLC, York, PA (A)
PROTEM USA, Evergreen, CO (PC, TC, UW)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (PC, PW, R, TC, UW)
TEiC, Duncan, SC (TC)
Teledyne FLIR, Chelmsford, MA (R)
Tri Nuclear Corp., Ballston Lake, NY (CP, UW, V)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (UW)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (A, P, PW, VB, WJ)
Westinghouse Electric Co. LLC, Cranberry Township, PA (CS, U, UW, V)
Wheelift Transporters, Waverly, IA (R)
Wälischmiller Engineering GmbH, Markdorf, Baden-Württemberg, Germany (R)

10850 Clothing, Protective, Anti-Contamination–*also see Respiratory Protection Equipment*

BS Bubble Suits
C Coveralls
CL Coveralls, Lightweight, Breathable
D Disposable
DS Dissolvable
G Gloves
H Head Coverings
L Lab Coats
MG Modesty Garments, Lightweight, Breathable
SP Scrub Shirts & Pants
SC Shoe Covers

Coastal Network, Inc., Charlottesville, VA (C, CL, D, G, L, SP, SC)
Elcometer Inc., Warren, MI (C, CL, G, H)
✦EnergySolutions LLC, Salt Lake City, UT (D)
Frham Safety Products, Inc., Nashville, TN (BS, C, CL, D, DS, G, H, L, MG, SP, SC)
ISA Corp., Salem, OR (SC)
JSM Protective, Inc., Vero Beach, FL (C, D, G, H, L, SC)
Lancs Industries, Albuquerque, NM (BS, D, G, SC)
Protective Plastics, Inc., Greenville, SC (C, CL, D, SC)
Radiation Safety & Control Services, Inc., Seabrook, NH (C, D, G, H, SC)
Radium Inc., Waynesboro, VA (BS, D)
Rich Industries Inc., New Philadelphia, OH (BS, C, CL, D, G, H, L, MG, SP, SC)
RSO, Inc./Radiation Service Organization, Laurel, MD (D)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (BS, C, CL, D, G, H, L, MG, SP, SC)
Vitto Corp., Kanagawa, Japan (G)
Weldstar, Aurora, IL (G)

10900 Clothing, Protective, Other Than Anti-Contamination–*also see Respiratory Protection Equip.*

B Bibs & Aprons
C Coveralls
CL Coveralls, Lightweight, Breathable
FS Face Shields
F Footwear
GG Gloves, Grinding
GW Gloves, Welding
GS Goggles/Spectacles
HH Hard Hats
HL Hat Liners
HP Hearing Protection Devices
HF Helmets, Fire
LC Lab Coats
MG Modesty Garments, Lightweight, Breathable
RW Rainwear
RF RF Shielding
SC Scrub Suits
SS Splash Sleeves
V Vests, Cool

Coastal Network, Inc., Charlottesville, VA (FS, GS, HH, MG, RW, V)
Elcometer Inc., Warren, MI (B, C, CL)
Frham Safety Products, Inc., Nashville, TN (B, C, CL, FS, F, GG, GW, GS, HH, HL, HP, LC, MG, RW, SC, SS, V)
ISA Corp., Salem, OR (F)
JSM Protective, Inc., Vero Beach, FL (C, FS, F, GW, GS, RW, SS, V)
Lancs Industries, Albuquerque, NM (RW)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (RF)
Protective Plastics, Inc., Greenville, SC (C, CL, FS, F, GG, GW, GS, HH, HL, HP, LC, RW)
Radium Inc., Waynesboro, VA (FS, V)
Rich Industries Inc., New Philadelphia, OH (B, C, CL, F, HL, LC, MG, RW, SC, SS)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (B, C, F, RF, V)
Weldstar, Aurora, IL (FS, GW, HH)

11400 Coatings–*also see Consultants; Corrosion Inhibitors; Testing Serv.*

C Cable
CS Concrete Sealing/Restoration/ Contamination Control
CR Corrosion-Resistant
FT Floor Toppings
IR Insulation-Related
LC Low-Chloride
S Strippable

Advanced Nuclear LLC, East Petersburg, PA (IR)
Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (CR)
BHI Energy, Weymouth, MA (CS, S)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (C, CR)
Cortec Corp., Saint Paul, MN (CS, CR, S)
Electric Motor and Contracting Company Inc., Chesapeake, VA (CR)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CS, CR, IR)
Frham Safety Products, Inc., Nashville, TN (S)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (CS, CR, FT)
Hennigan Engineering LLC, Hingham, MA (CS, CR, S)
Hexion Inc., Columbus, OH (CS, CR)

Plastocor, Inc., Hingham, MA (CR)
✦Reef Industries, Inc., Houston, TX (FT)
Southwest Research Institute, San Antonio, TX (CR, IR)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (CS)
VTT Technical Research Centre of Finland, VTT, Finland (CS, CR)

11650 Communication Systems–*also see Emergency Warning Systems; Security Systems*

F Face Mask Accessories
H Headsets
P Paging
RM Repeated Message Tape/Speaker Boxes
T Telephone Conferencing (Audio)
TV Telephone Conferencing (Video)
T Telephonic (Computerized Calling/Answering)
TW Two-Way Radio

Cobalt Audio Video, (A div. of Comtronics), Lexington, KY (F, T, TV, TW)
Comtronics, Lexington, KY (F, T, TV, TW)
Dufrane Nuclear Shielding Inc., Winsted, CT (H, T, TW)
Frham Safety Products, Inc., Nashville, TN (F, H)
PSC Vodec, Nottingham, United Kingdom (P)
Radium Inc., Waynesboro, VA (H)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (H, P, RM)

11680 Compactor Disks, for Drums

S&G Enterprises, Inc., Germantown, WI

11700 Compactors–*also see Radioactive Waste Treatment Equipment; Solid Waste Reduction Equip.*

Container Products Corp., Wilmington, NC
Framatome Inc., (North American Headquarters), Lynchburg, VA
S&G Enterprises, Inc., Germantown, WI
Waste Control Systems, Inc., Phoenix, MD

12800 Computer Software–*also see Imaging, Digital; Records Management Sys.*

AI Artificial Intelligence
CB Cable Management
CF Configuration Management/Control
CA Contract Administration
CP Critical Path Scheduling
CD Custom Development
DB Data Base Management
DM Decontamination Management
D Dosimetry
DD Drawing & Document Control
EC Economic Analysis
ET Education/Training
E Electrical Analysis
EP Emergency Planning
ER Emergency Response (In-Plant)
EA Engineering Analysis
EM Environmental Monitoring
EQ Equipment Status/Tagout Tracking
ES Expert Systems
FT Fault-Tolerant Automatic Control
FR Failure/Root Cause Trending
FS Fire/Safety
IN Instrument Calibration
IC Inventory Control (Equipment, Supplies, etc.)
MC Maintenance Control
OS Operator Scheduling
P Piping System Design & Analysis
PD Plant Design
PS Procedure Status/Tracking
PM Project Management
QA Quality Assurance/Quality Control
RC Radiological Control/Health Physics
R Reliability Analysis
RE Reportability Evaluation
RI Risk Analysis
SE Security
SI Simulation
SM Software Maintenance/Control
SP Software Packages
SN Special Nuclear Material Tracking
S Spectroscopy
TS Technical Specification Systems
TE Telerobotics
TR Trending
WM Waste Management
WC Water Chemistry Management

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (S)
Applied Analysis Corp., Reading, PA (CD, EA, P, QA, SI, SM)
ARES Security Corp., Vienna, VA (EP, ER, SE, SI)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (TE)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (TE)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (TE)
✦Attention IT, Inc., Knoxville, TN (CF, DB)

The Austin Company, Cleveland, OH (CA, DD, EA, PD, PS)
AVANTech, LLC, Knoxville, TN (EA, WM, WC)
AVANTech, LLC, Columbia, SC (EA, WM, WC)
✦Banda Group International, LLC, Chandler, AZ (CA)
Bevelacqua Resources, Richland, WA (DM, D, ET, EP, ER, EM, RC, RI, SI, SM, SP, SN, S)
Black & Veatch, Overland Park, KS (CF, CA, CP, DB, DD, EC, E, EA, EQ, FS, P, PD, PM, QA, R)
Boston Government Services, LLC (BGS), Oak Ridge, TN (CF, CP, CD, DB, DM, DD, EC, ET, E, EP, ER, EA, P, PD, PM, QA, R, RI, SE, SI, SM, SP, SN)
CAEN SyS, Viareggio, LU, Italy (SN, S, WM)
Campoverde srl, Milano, Italy (D)
Chesapeake Nuclear Services, Inc., Annapolis, MD (EM, RC)
CHP Consultants/Counts.Pro, Oak Ridge, TN (CD, DM, D, EP, ER, EM, QA, RC, WM)
CM Technologies Corp., Coraopolis, PA (ES, QA)
Coastel Cable Tools, Inc., East Syracuse, NY (IN, MC)
Cogentus, Washington, DC (AI, DM, EC, RE, WM)
Computer Engineering Services, Inc., Chattanooga, TN (CD, ER, EA, EM)
Copperleaf Technologies Inc., Vancouver, British Columbia, Canada (RI)
Cragg Consulting, Grapevine, TX (RI)
CTR Technical Services, Inc., Manitou Springs, CO (CD, EA, RI, SI, SP)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (CD, DB, EA, SP)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CF, CD, DB, D, EP, EA, EQ, FR, FS, IC, MC, P, PM, R, RI, SE, SP, SN, TS, TR, WC)
Deytec, Inc., Ashburn, VA (ET, EA, FS, RI, SI)
Ebersen, Inc., Minneapolis, MN (WM)
Energy Resources International Inc., Washington, DC (CD)
Engineering Planning and Management, Inc., Framingham, MA (CB, DB, FS, QA, SP)
ENVINET GmbH, Munich/Haar, Germany (EM, SP)
ETAP - Operation Technology, Inc., Irvine, CA (CB, ET, E, R, SI)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CP, CD, DM, DD, EC, E, EP, ER, EA, FS, PD, QA, RI, SE, SI, TR, WM, WC)
General Atomics Electromagnetic Systems, San Diego, CA (EM, RC)
Geovariances, Avon, France (DM, RI, SP, WM)
GSE Hyperspring, Columbia, MD (CF, CP, DB, EP, ER, EA, EM, ES, MC, P, PD, WC)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (DD, FT, SI)
Hoskin Scientific, Oakville, Ontario, Canada (EM)
HukariAscendent, Wheat Ridge, CO (CF, DM, EP, ER, EA, FR, FS, MC, P, PS, PM, QA, RC, R, RI, SN, TS, WM)
Huxtable Consulting LLC, Lexington, SC (CD, EC, EA, SP)
✦I.C.E. Service Group, Inc., Moon Township, PA (WM)
InVizion LLC, Bala Cynwyd, PA (EC, PM)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (DM, EM, RC, SN)
Kinectrics Inc., Toronto, Ontario, Canada (D)
L3Harris, (Power Systems and Simulation), Montreal, Quebec, Canada (PD, QA)
Mirion Technologies, Inc., Atlanta, GA (CF, DB, ET, EM, IN, RC, SI, SP, S)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL
NextAxiom Technology, Inc., San Francisco, CA (CD, PS, SP)
NuclearConsultants.com, Ann Arbor, MI
Nuclear-21, Waasmunster, Belgium (ET, ES)
Nucleonova S.L., Valencia, Spain (EA, QA)
NuVision-HWM, Pittsburgh, PA (TE)
PAR Systems, LLC, Shoreview, MN (R, TE)
Power & Energy Systems Services, Oradell, NJ (EA, PD, TS)
Primm Consulting, LLC, Knoxville, TN (EC, SI, SP)
Promation Nuclear, Oakville, Ontario, Canada (AI, EA, QA, TE)
RadComm Systems Corp., Oakville, Ontario, Canada (RC)
Radiation Safety & Control Services, Inc., Seabrook, NH (CP, DB, D, EM, WM, WC)
Radium Inc., Waynesboro, VA (CP, CD, EQ, IC, MC, OS, PD, PS, PM)
Red Wolf Associates, Cary, NC (CD, EA, FS, P, PD, PM, QA, RI, SI, SP)
Rockwell Automation, Inc., Milwaukee, WI (EM, PD, SP, WM)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AI, CB, CF, CA, CP, CD, DB, DM, D, DD, EC, ET, E, EP, ER, EA, EM, EQ, ES, FT, FR, FS, IN, IC, MC, OS, P, PD, PS, PM, QA, RC, R, RE, RI, SE, SI, SM, SP, SN, S, TS, TE, TR, WM, WC)
Sargent & Lundy, Chicago, IL (CB, CF, CP, DB, DD, ET, E, EP, EA, ES, FR, IC, MC, P, PD, PM, QA, RC, R, RI, SE, SM, TS, WC)
Sensor Networks, Inc., State College, PA (TE)
Southwest Research Institute, San Antonio, TX (AI, DB, ET, EA, ES, FS, RC, R, RI, SI, S, TE, WM)
✦SSM Industries, Inc., Pittsburgh, PA (EA)
Studsvik, Inc., Atlanta, GA (P, PD, PM, SI)
Tap Report, Toronto, Ontario, Canada (FS)
TEiC, Duncan, SC
✦Teledyne Brown Engineering, Inc., Huntsville, AL (EM)
TRAD Tests & Radiations, Labege, France (SI, SM, SP)
Unique Technical Resources, Wayne, PA (CB, CF, FS, PD, PM)
UxC, LLC, Roswell, GA (EC)
Vitto Corp., Kanagawa, Japan (WM)
Volian Enterprises, Inc., Murrysville, PA (CD, DB, ER, MC, SP, TS)
Westinghouse Electric Co. LLC, Cranberry Township, PA (CF, CD, EA, PS, SI, SN, TS, WM)
Wheelift Transporters, Waverly, IA (PD)
Wälischmiller Engineering GmbH, Markdorf, Baden-Württemberg, Germany (TE)
✦WMG, Inc., Peekskill, NY (SN, WM)

12900 Computers & Accessories–*also see Data Acq. Sys.; Data Readout*

A Analog
AI Artificial Intelligence Systems
CG Color Graphics
C Converters
D Digital
DD Disk Drives
ES Expert Systems
HH Hand-Held
H Hybrid
IO Input/Output Interface Units
MF Main Frame
MS Mass Storage Units
M Memory Units
MC Micro
MP Microprocessor Circuit Boards
MN Mini
PR Printers
TD Tape Drives
VD Video Display Units

Acromag Inc., Wixom, MI (A, C, IO)
AVANTech, LLC, Knoxville, TN (A, CG, D, IO)
AVANTech, LLC, Columbia, SC (A, CG, D, IO)
Bot Engineering Ltd, Campbellville, Ontario, Canada (A, C, D, H, MP)
CHP Consultants/Counts.Pro, Oak Ridge, TN (HH)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (D, MC, MN)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CG, IO, MP, VD)
GLSEQ, LLC, Huntsville, AL (HH)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (A, IO, MP)
Labor Sync, Dumont, NJ (HH)
Mirion Technologies (Canberra) Inc., Meriden, CT (D, MC, MN)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (D, IO, VD)
Rockwell Automation, Inc., Milwaukee, WI (IO)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AI, D, ES, HH, H, IO, MF, MS, MC, MP, MN, PR, TD, VD)

13050 Concrete Breaking, Drilling, Sawing & Scabbling

C Contractors
E Equipment
R Equipment Rental

✦American DND Inc., Grand Island, NY (C, E, R)
BHI Energy, Weymouth, MA (C, E, R)
Brokk AB, Skelleftea, Sweden (E)
✦Brokk Inc., Santa Fe, NM (E, R)
See advertisement on page 7
Dufrane Nuclear Shielding Inc., Winsted, CT (C)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (C)
In-Place Machining Company, LLC, Batavia, OH (C, E)
Mega-Tech Services, LLC, Cooksburg, PA (C)
New Millennium Nuclear Technologies International, Lakewood, CO (C)
Wheelift Transporters, Waverly, IA (C, E)

13400 Connectors–*also see Feedthroughs*

DC Data Communications
E Electrical
EG Electrical, Glovebox
EQ Electrical, Quick Disconnect
FO Fiber Optic
T Thermocouple

Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (E, EQ, FO, T)
Framatome Inc., (North American Headquarters), Lynchburg, VA (T)
Glenair, Inc., Wallingford, CT (E, EQ, FO, T)
Kanata Electronic Services Ltd., Toronto, Ontario, Canada (EQ)
LEMO S.A., Ecublens, Switzerland (DC, E, EQ, FO, T)
Mirion Technologies, Inc., Atlanta, GA (E, FO, T)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (DC, E, EG, EQ, FO)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (E, EG)
Westinghouse Electric Co. LLC, Cranberry Township, PA (E, EQ, FO, T)

13600 Consoles, Control

AVANTech, LLC, Knoxville, TN
AVANTech, LLC, Columbia, SC
Energy Steel, Lapeer, MI
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI
Nu-Energy Technologies, Inc., Providence Forge, VA
Rolls-Royce Civil Nuclear, Warrington, United Kingdom
Sylvan Automation Ltd., Oakville, Ontario, Canada

13700 Construction Materials

AE Anchors, Chemical (Epoxy)
A Anchors, Concrete
AF Asbestos-Free Fiber Cement
CG Commercial Grade Dedication

C Concrete
RB Concrete Reinforcement, Bar (Rebar)
RM Concrete Reinforcement, Mesh
LF Lumber, Fire-Retardant-Treated
R Refractory
SP Splices, Rebar
SS Steel, Structural--also see Metals, Steel

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (SS)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (A, RB, RM, SP, SS)
✦Container Technologies Industries, LLC, Helenwood, TN (SS)
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH (A)
Dubose National Energy Services, Inc., Clinton, NC (A, RB, SS)
Dufrane Nuclear Shielding Inc., Winsted, CT (C, RB)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (A, SP, SS)
✦Joseph Oat Corp., Camden, NJ (SS)
MillenniTEK, LLC, Knoxville, TN (R)
Nuclear Shielding Supplies & Service, Tucson, AZ (C)
PMT Nuclear, Woodridge, IL (AE, A, SS)
Unified Engineering, Hamilton, Ontario, Canada (SS)

13850 Construction/Engineering Services–*also see Consultants; Maintenance Services*

AE Architect-Engineers
CE Civil Engineers
CS Construction Services
EC Engineer-Constructors
ES Erection Services

Advanced Nuclear LLC, East Petersburg, PA (ES)
The Austin Company, Cleveland, OH (AE, CE, CS, EC)
Barge Design Solutions, Nashville, TN (AE, CE)
Barnhart Nuclear Services, Fairhope, AL (CS, ES)
Bigge Power Constructors, (Affl. of Bigge Crane and Rigging Co.), San Leandro, CA (CS, EC, ES)
Black & Veatch, Overland Park, KS (AE, CE, CS, EC, ES)
Bluegrass Concrete Cutting, Inc., Greenville, AL (CS)
Boston Government Services, LLC (BGS), Oak Ridge, TN (AE, CE)
Burns & McDonnell, Kansas City, MO (AE, CE, CS, EC, ES)
Dufrane Nuclear Shielding Inc., Winsted, CT (CS, EC, ES)
EKIUM, Bron, France (AE, CE, CS)
Engineered Rigging, Russellville, AR (AE, CE, CS, EC)
Engineered Rigging, Valparaiso, IN (AE, CE, CS, EC)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (CS, EC, ES)
Garney Construction, North Kansas City, MO (CS)
GSE DP, (DP Engineering), Fort Worth, TX (AE, CE, CS, EC, ES)
Haley & Aldrich, Inc., Portland, ME (CE, CS, EC)
HukariAscendent, Wheat Ridge, CO (AE, CE)
ibeX - Energy Solutions, McLean, VA (EC)
Idom Consulting, Engineering, Architecture S.A.U., Bilbao, Spain (AE, CE, CS, EC)
Imperia Engineering Partners LLC, Bordentown, NJ (CE, CS, EC)
INGEROP Conseil et Ingenierie, (a company of INGEROP Group), Cebazat, France (AE, CE)
Kinectrics Inc., Toronto, Ontario, Canada (CE)
Leak Testing Specialists, Inc., Orlando, FL (EC)
L Rettinger Energy Technology Solutions, Collier Township, PA (EC, ES)
Manafort Brothers Inc., Plainville, CT (CS)
Miller Pipeline, Indianapolis, IN (CS)
North GeoEngineering Services, LLC, Albuquerque, NM (CE, CS)
North Wind Group, Idaho Falls, ID (AE, CE, CS, EC)
NV5/Dade Moeller, Richland, WA (CE, CS)
✦Orano Federal Services, Charlotte, NC (AE)
PMT Nuclear, Woodridge, IL (CS, ES)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AE, CE, CS, EC)
Sargent & Lundy, Chicago, IL (AE, CE)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (EC, ES)
Studsvik, Inc., Atlanta, GA (AE)
System One, Pittsburgh, PA (AE, CE, CS, EC)
TradeWind Services LLC, Richland, WA (AE, CE, CS, EC)
TRAD Tests & Radiations, Labege, France (CE)
Westinghouse Electric Co. LLC, Cranberry Township, PA (AE, CE, CS, EC)

14000 Consultants–*also see Analysis; Training*

AC Air Cleaning, Filtration
AU Auditing
C Chemical Process Design
CO Coatings/Corrosion
CM Communications, Management-Employee
CD Component/System Design & Analysis
CS Computer Systems & Software
CC Configuration Control
CA Contract Administration
CH Cranes & Hoists
CE Criticality Hazard Evaluation
DC Decontamination
DE Decommissioning
ES Earth Science Services
EA Economic Analysis, Trade-off Studies
EP Emergency Planning & Response
E Environmental
EC Equipment Condition Monitoring
FP Fire Protection
FT Fuel Transport/Storage
LP Lightning Protection
MN Maintenance
MA Management Audit
MI Management Information & Control Systems
M Meteorology
N Noise Abatement
OD Organization Development
PE Performance Measurement
PH Personnel Stress/Health
P Piping
PS Procurement Support
PP Project Planning & Management
QA Quality Assurance/Quality Control
RD Radiation Management
RE Radiological Engineering
RM Records Management Systems
RO Reengineering, Organization
RC Regulatory Compliance
RA Risk Analysis
S Security
SE Seismic
SH Shielding
SS Simulation Services
SI Siting
SY System Engineering-Requirements Analysis
ST Systems Testing
TE Training Evaluation, Management
TA Trend Analysis & Corrective Action Programs
WM Waste Management
WT Water Treatment

Adam Brown Consulting, Inc., Cary, IL (AU, CO, DE, FP, MN, MA, OD, PE, PP, QA)
Advanced Consulting Group, Inc., Chicago, IL (DE, MN, PP)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (DE)
American Crane & Equipment Corp., Douglassville, PA (CH)
✦American DND Inc., Grand Island, NY (CA, CH, DC, DE, E, PP, WM)
Amphos 21 Consulting, Barcelona, Spain (DC, DE, E, WM)
Anamet, (a Div. of Acuren Inspection, Inc.), Hayward, CA (CO)
F.N. Anderson & Assoc., Forest, VA (CD, CE, DE, E, FT, QA, SH, WM)
Anvil International, LLC, North Kingstown, RI (P)
Applied Analysis Corp., Reading, PA (CD, FT, M, QA, RE, RC, SH, SS, SI)
ARES Security Corp., Vienna, VA (EP, S)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (DE, WM)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (DE, WM)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (DE, WM)
✦Attention IT, Inc., Knoxville, TN (MI, WM)
Attenuation Environmental Co., Seattle, WA (DE, E, RE, RC, WM)
The Austin Company, Cleveland, OH (CA, PS, PP, QA, RO)
AVANTech, LLC, Knoxville, TN (C, E, SH, WM, WT)
AVANTech, LLC, Columbia, SC (C, E, SH, WM, WT)
Barnhart Nuclear Services, Fairhope, AL (CH)
✦Bechtel Nuclear, Security & Environmental, Reston, VA (CD, DC, DE, E, MI, PS, PP, QA, RC, S, SI, WM, WT)
Bevelacqua Resources, Richland, WA (CE, DC, DE, E, RD, RE, RA, TE, WM)
BHI Energy, Weymouth, MA (AC, CO, CD, CC, DC, DE, EP, E, MN, MA, PP, QA, RD, RE, RC, RA, SH, TE, TA)
Bigge Power Constructors, (Affl. of Bigge Crane and Rigging Co.), San Leandro, CA (CH, DE, FT)
Black & Veatch, Overland Park, KS (AC, C, CM, CD, CS, CC, CA, DE, ES, EA, E, EC, FP, FT, LP, MA, MI, N, OD, P, PS, PP, QA, RE, RM, RO, RC, RA, S, SE, SI, ST, TE, TA, WT)
Boston Government Services, LLC (BGS), Oak Ridge, TN (CD, CS, CC, CE, DC, DE, FP, PP, QA, RC, RA, S, SH, SS, SY, ST, TE, TA)
Burns & McDonnell, Kansas City, MO (AC, C, CO, CM, CD, CS, CC, CA, CH, CE, DC, DE, ES, EA, E, FP, OD, PE, P, PS, PP, QA, S, SE, SH, SI, SY, ST, TE, TA, WM, WT)
BWX Technologies, Inc., Lynchburg, VA (CD, SH, SY)
Cabrera Services Inc., East Hartford, CT (CE, DC, DE, EP, E, PP, QA, RD, RE, RC, RA, WM)
Campoverde srl, Milano, Italy (DC, DE, RE)
CBS Nuclear Services, Inc., Matthews, NC
Chesapeake Nuclear Services, Inc., Annapolis, MD (DE, EP, E, RD, RE, SH, WM)
CHP Consultants/Counts.Pro, Oak Ridge, TN (CD, CS, DC, DE, EP, E, RD, RM, SH, TA, WM)
COFREND, Paris, France (MA)
Cogentus, Washington, DC (DE, WM)
Computer Engineering Services, Inc., Chattanooga, TN (CS, RD, RC)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (CO, CD, SY)
Container Products Corp., Wilmington, NC (DC)
Copperleaf Technologies Inc., Vancouver, British Columbia, Canada (CS, PP, RA)
Cortec Corp., Saint Paul, MN (CO)
Cragg Consulting, Grapevine, TX (RA)
CS-2 Inc., Grand Island, NY (CA, DC, DE, E, PS, PP, QA, WM)
CTR Technical Services, Inc., Manitou Springs, CO (CE, SH)
Curtiss-Wright Nuclear Division, AP Services, Middleburg Heights, OH
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (CD, EC, MN, PS, QA, RA, SE, TE)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (CS, WM)

Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (E, MN, PS, QA, RC, SE, SH)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (C, CD, CS, CC, CH, CE, EP, EC, FT, MN, MA, MI, P, PS, PP, QA, RD, RM, RC, RA, S, SE, SH, SS, ST, TE)
DB2 Consulting Inc., Baltimore, Ontario, Canada (AU, CA, OD)
DCS Systems, Inc., Simsbury, CT (CS, MA, QA, TA)
Decidia Research & Consulting, Sabadell, Barcelona, Spain (AU, EA, E, PE, QA, RA, SI, WM)
The Delphi Groupe, Inc., Austin, TX (CM, CS, CC, CA, DC, DE, EP, E, FP, MA, PP, RD, RE, RM, RC, SH, SI, TE, WM)
Deytec, Inc., Ashburn, VA (FP, PP, RC, RA)
Dominion Engineering, Inc., Reston, VA (C, CO, WM)
Dufrane Nuclear Shielding Inc., Winsted, CT (AU, CD, MN, PP, RD, RE, SH, WM, WT)
DW James Consulting, North Oaks, MN (DE, RE, SH, WM)
Ebersen, Inc., Minneapolis, MN (E, MA)
ECU Corporation, Cincinnati, OH (AC)
EKIUM, Bron, France (AC, C, CD, CS, CC, CE, DE, EP, EC, FP, LP, MN, MI, P, PS, PP, RO, RA, S, SE, SS, SY, ST)
Ellis & Watts Global Industries, Inc., Batavia, OH (AC)
Empyrean Services, Sewickley, PA (AU, CM, CD, CC, CA, CE, DC, DE, ES, EA, EP, E, EC, FP, FT, LP, MN, MA, MI, N, OD, PE, RD, RE, RM, RO, RC, RA, S, SE, SH, SS, SI, SY, ST, TE, TA, WM)
Enercon Services, Inc., (Talisman Div.), Kennesaw, GA (DE, EP, E, FT, MA, PE, PP, RD, RC, RA, S, SI, WM)
Energy Resources International Inc., Washington, DC (CS, EA, MA, PS, WM)
✦Energy, Technology and Environmental Business Association, Oak Ridge, TN (WM)
See advertisement on page 151
Engineered Rigging, Russellville, AR (CH, MN, PP, QA)
Engineered Rigging, Valparaiso, IN (CH, MN, PP, QA)
Engineering Planning and Management, Inc., Framingham, MA (CD, CS, CC, FP, MA, PS, RC, RA, SY, TE)
ENVINET GmbH, Munich/Haar, Germany (E)
Environmental Alternatives, Inc., Swanzey, NH (DC)
Environmental Restoration Group, Inc., Albuquerque, NM (DE, E, RA)
Equipos Nuclear S.A., S.M.E, Maliaño (Cantabria), Spain (P)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (MN, P, QA)
EXCEL Services Corporation, Rockville, MD (DC, DE, EP, E, FP, MA, OD, PP, QA, RO, RC, RA, S, SI, TE, WM)
Fluor, Arlington, VA (CA, CE, DE, ES, EA, EP, E, EC, FP, FT, LP, MN, MA, MI, M, N, OD, RA, SY, WM)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, CO, CD, CS, CC, CE, DC, EP, E, FP, MN, PE, P, PS, PP, QA, RD, RE, RM, RC, RA, S, SE, SH, SS, SY, ST, TE, TA, WM, WT)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (CO, DC, DE, FP, FT, P, WT)
Full On Communications, Woodstock, VT (CM)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (EP, E)
GEL Solutions, LLC, (A Member of The GEL Group, Inc.), Charleston, SC (SE)
General Atomics Electromagnetic Systems, San Diego, CA (CD, CS, E, PP, RD, RE, RC, SS, ST)
General Magnaplate, Arlington, TX (CO)
Gen IV Nuclear Energy Systems Services, Rockville, MD (CS, RA, SY)
Geovariances, Avon, France (DC, DE, ES, E, RA, WM)
Global Quality Management Advisors, Lynchburg, VA (CC, E, MA, PP, QA, RM, RC, SE, TE, TA)
GLSEQ, LLC, Huntsville, AL (PS)
GoldSim Technology Group, Seattle, WA (E, RC, RA, WM)
Thomas Gray & Associates, Inc., (Owner of Environmental Mgmt. & Controls, Inc.), Orange, CA (WM)
GSE DP, (DP Engineering), Fort Worth, TX (CC, EC, FP, FT, MN, MA, MI, PE, PH, P, PS, QA, RO, RC, SS, TA)
GSE Hyperspring, Columbia, MD (SS, TE)
GSE TrueNorth, Montrose, CO (CD, CS, CC, EA, E, EC, FT, MN, MA, MI, PE, PS, QA, RO, RC, RA, SS, SY, ST, TE, TA, WM)
HealthPhysics.com, Amarillo, TX (AC, CM, CD, DC, DE, EP, OD, PE, PH, RD, RE, RC, TE, TA)
Hexion Inc., Columbus, OH (CO)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (QA, RC, SE, ST)
Highland TEMS, LLC, Marietta, GA (CD, CC, MI, OD, PP, RO, RA, SY)
✦Holtec International, Camden, NJ (CE, DE, FT, P, QA, RC, SE)
HukariAscendent, Wheat Ridge, CO (AC, C, CO, EP, E, FT, MA, MI, PE, RD, RE, RC, RA, SS)
ibeX - Energy Solutions, McLean, VA (PP, WM)
✦I.C.E. Service Group, Inc., Moon Township, PA (DE, E, PP, QA, RD, WM)
Idom Consulting, Engineering, Architecture S.A.U., Bilbao, Spain (AC, CO, CD, CC, DE, EA, EP, FP, LP, MA, M, P, PS, PP, QA, RE, RA, S, SE, SH, SS)
ILD, Inc., Baton Rouge, LA (P, ST)
Imperia Engineering Partners LLC, Bordentown, NJ (CO, CD, CS, CC, CA, DE, E, EC, FT, LP, MA, N, P, PS, PP, QA, RC, RA, S, SE, SH, SI, SY, ST, TA)
INGEROP Conseil et Ingenierie, (a company of INGEROP Group), Cebazat, France (AC, C, CH, DE, ES, E, PP, SE, SI, WM)
In-Place Machining Company, LLC, Batavia, OH (DE)
Intek, Inc., Westerville, OH
Interdevelopment, Inc., Falls Church, VA (EA, PS, PP)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (CS, CE, DC, DE, RD, RE, SH)
✦Joseph Oat Corp., Camden, NJ (E, P, PS, QA)
KEPCO E&C, Port Elgin, Ontario, Canada
Kinectrics Inc., Toronto, Ontario, Canada (C, CO, CD, DC, DE, E, EC, LP, MN, RD, RE, RC, RA, SE, SH, ST, TE, WM)
Kinemetrics, Inc., Pasadena, CA (SE)
Klein Consulting LLC, Norwich, CT (AU, QA)
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (CH)
Leak Testing Specialists, Inc., Orlando, FL (QA)
LeBlond and Associates, LLC, Libertyville, IL (CC, RC)
Lightbridge Corp., Reston, VA (PP, RC)
Lucideon, Durham, NC (WM)
LUDECA, Inc., Doral, FL (EC)
A. C. Macris, Consultants, Mystic, CT (MI, PP, TE)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (SH, WM)
Materials and Chemistry Laboratory, Inc., (MCLinc), Oak Ridge, TN (E)
Matom Ltd., North Wales, United Kingdom (C, CD, DE, RD, RE, RC, WM, WT)
McWane and Assoc., San Jose, CA (WT)
Mega-Tech Services, LLC, Cooksburg, PA (DC, MN)
METOIL, Praha, Czech Republic (C)
MillenniTEK, LLC, Knoxville, TN (FT, MI, SH)
Mirion Technologies (Canberra) Inc., Meriden, CT (CE, DC, DE, EP, E, MI, PP, RD, RE, RM, SI, WM)
Morson International Inc., (Morson Canada), Toronto, Ontario, Canada (DE, EP, FP, FT, MN, PS, PP, QA, RD, RA)
✦NAC International Inc., Peachtree Corners, GA (CD, CE, EA, FT, RM, WM)
NAC LPT LLC, Sewickley, PA (E, WM)
National Inspection & Consultants, Fort Myers, FL (CA, MN, MA, PS, PP, QA, RM, TE)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL
Navarro Research and Engineering, Inc., Oak Ridge, TN (CE, DC, DE, ES, EP, E, FP, QA, RD, RE, RM, RC, RA, WM, WT)
Netzsch Instruments North America LLC, Burlington, MA (ES)
North GeoEngineering Services, LLC, Albuquerque, NM (ES, SE)
NovaTech, Lynchburg, VA (CC, CA, CH, P, PP, QA, ST)
NuclearConsultants.com, Ann Arbor, MI (CD, CS, CE, FT, SH, WM)
Nuclear Economics Consulting Group (NECG), Alexandria, VA (EA, PS, RA)
Nuclear Shielding Supplies & Service, Tucson, AZ (SH)
Nuclear Systems Associates, Inc., Brea, CA (CD, MN, SY, ST, WM)
Nuclear Technology Services, Inc., Roswell, GA (RE)
Nuclear Training Institute, Norcross, GA (CM, CA, MA, OD, QA, TE)
Nuclear-21, Waasmunster, Belgium (AU, OD, RC)
Nucleonova S.L., Valencia, Spain (CD, MA, PS, QA, RO, SY)
NUCON International, Inc., Columbus, OH (AC, C, CD, WM, WT)
NuSource LLC, Alexandria, VA (CD)
NV5/Dade Moeller, Richland, WA (CA, DC, DE, EP, E, FP, MA, N, RD, RE, RM, RC, SH, TE, WM)
✦Orano Federal Services, Charlotte, NC (RE, SE, SH, SI, WM, WT)
PAR Systems, LLC, Shoreview, MN (CD, CH, SE, SY, WM)
Paschal Solutions, Inc., Knoxville, KY (CE, FP, MA, PP, RE, RC, SH, TA)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (RE)
Pioneer Motor Bearing Co., Kings Mountain, NC
Platom Oy, Mikkeli, Finland
PMT Nuclear, Woodridge, IL (AC, P, QA, SE, SH)
Power & Energy Systems Services, Oradell, NJ (CD, EC, TE, TA)
Powerfect Service, Inc., Brick, NJ (MN, QA)
Power Generation Integrated Consulting Limited (PGICL), Etobicoke, Ontario, Canada (AU, CC, MI, OD, PP, QA, RC, SY, TE, WM)
✦Precision Custom Components, LLC, York, PA (CD, SE)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (CC, CH, FT, MN, SH)
Primm Consulting, LLC, Knoxville, TN (CS, CE, EA, SH)
Promation Nuclear, Oakville, Ontario, Canada (AC, AU, CO, DE, QA)
Prospect Law Ltd., London, United Kingdom (DE, E, RC, RA)
PTP Spent Fuel Services, LLC, Grand Island, NY (DE, FT, PP, WM)
RadComm Systems Corp., Oakville, Ontario, Canada (RD)
Radiac Research Corp., Brooklyn, NY (RD)
Radiation Control, Inc., Tallahassee, FL (AU, RD, RE, RC, TE, TA, WM)
Radiation Safety & Control Services, Inc., Seabrook, NH (AU, CE, DC, DE, EP, E, EC, MA, OD, PP, QA, RD, RE, RC, RA, SS, SY, ST, TE, TA, WM)
Radics LLC, Kropyvnytskyi, Ukraine (CD, CS, FP, MI, SE)
Radiological Solutions Inc., Rockdale, IL (E, RE, TA, WM, WT)
Radium Inc., Waynesboro, VA (CM, MN, PE, PP)
Ray Termini & Associates LLC, Wheaton, IL (FT, PP)

Red Wolf Associates, Cary, NC (FP, M, P, RE, RA, SH, SY, TE)
RETAQS, Inc., Blue Bell, PA (PP)
Right Brain Sekurity, Oswego, IL (MA, RA, S, TE)
Robatel Technologies, LLC, Roanoke, VA (FT, WM)
Rockwell Automation, Inc., Milwaukee, WI (CS)
Rogante Engineering Office, Civitanova Marche, Italy (AC, CO, DE, QA)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AC, C, CO, CM, CD, CS, CC, CA, CH, CE, DC, DE, ES, EA, EP, E, EC, FP, FT, LP, MN, MA, MI, M, N, OD, PE, PH, P, PS, PP, QA, RD, RE, RM, RO, RC, RA, S, SE, SH, SS, SI, SY, ST, TE, TA, WM, WT)
Rolls-Royce Civil Nuclear SAS, Meylan, France (CS, EC, MN, MI, RA, S)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (CS, EC, MN, MI, RA, S)
RSO, Inc./Radiation Service Organization, Laurel, MD (DC, DE, E, RD, WM)
Sargent & Lundy, Chicago, IL (AC, C, CO, CD, CS, CC, CA, CH, CE, DC, DE, ES, EA, EP, E, EC, FP, FT, LP, MN, MA, MI, M, N, PE, P, PS, PP, QA, RD, RE, RM, RC, RA, S, SE, SH, SS, SI, SY, ST, TE, TA, WM, WT)
Schulz Electric, Timken Power Systems, New Haven, CT (CH, MN)
SecurMAR, LLC, Zionsville, IN (S)
J. L. Shepherd & Assoc., San Fernando, CA (SH)
Sidus Solutions LLC, San Diego, CA (CH, S, TE, WM)
Siempelkamp NIS, Alzenau, Germany (DE)
SIET, Piacenza, Italy (PE, QA, ST)
Simpson Gumpertz & Heger (SGH), Chicago, IL (AU, CO, CD, CH, DE, FP, FT, P, PS, PP, QA, RC, SE, WM)
Southwest Research Institute, San Antonio, TX (C, CO, CD, CS, CE, DC, DE, ES, E, EC, FP, FT, N, P, QA, RE, RC, RA, SE, SH, SY, ST, TE, WM)
Springs Advanced Technology Group (ATG), LLC, Westminster, CO (DC, DE)
Studsvik, Inc., Atlanta, GA (E, P, PP, SS, ST)
Studsvik Scandpower, Wilmington, NC (CS, CE, SS)
Switchgear Solutions, Inc., Tucson, AZ
System One, Pittsburgh, PA (CO, CS, CC, CA, CE, DE, EP, E, EC, FP, FT, MN, MI, P, PS, PP, QA, RO, RC, RA, SI, SY, ST, TE, TA)
Talisman Div. of Enercon, Arlington, VA (CE, DC, DE, EP, E, FT, MA, QA, RC, RA, S, SE, SI, TA, WM)
TEiC, Duncan, SC (PP)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (SI, SY, ST)
See advertisement on page 90
Thermal Engineering International (TEi), Cerritos, CA
3 Bears Technical Services, LLC, Hixson, TN (AU, CC, DC, DE, FP, PE, PP, QA, RE, WM)
TradeWind Services LLC, Richland, WA (E)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (DE, MN)
Unique Technical Resources, Wayne, PA (CD, CC, DE, FP)
Utilities Service Alliance (USA), Overland Park, KS (PS)
UxC, LLC, Roswell, GA (CD, EA, PS)
VGSSolutions, Mississauga, Ontario, Canada
Vitto Corp., Kanagawa, Japan (SH, WM)
Volian Enterprises, Inc., Murrysville, PA (CC, EP, MI, TE)
Westinghouse Electric Co. LLC, Cranberry Township, PA (C, CO, CH, DC, DE, EC, FT, MN, P, PP, RD, RE, RC, RA, SE, SH, SS, SY, TE, WM, WT)
Wheelift Transporters, Waverly, IA (CH, WM)
✦WMG, Inc., Peekskill, NY (CS, DC, DE, E, FT, RD, RE, RC, SH, WM, WT)
Wolfgang Waelischmiller Solutions, München, Germany (DE)
Women in Nuclear Canada, Toronto, Ontario, Canada (CM, PE, PP, TE)
Wood, (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group), Grand Junction, CO (DC, DE, RD, RE, WM)

14300 Containers–*also see Radioactive Waste Handling; Shielding Materials*

B Bulk
CR Casks, Radwaste
SF Casks, Spent-Fuel Shipping
CS Casks, Spent-Fuel Storage
CO Component
DB Drum Breather Filters
DL Drum Liners/Inserts
D Drums
GA Gamma Source Shipping
GS Gamma Source Storage
G Groups 1, 2 and 3 Containers (per IAEA)
HI High-Integrity (HIC)
LI Liners/Inserts, LSA Containers
IA LSA Containers, IAEA
LS LSA Containers, Strong-Tight
OH On-Site Storage Containers, High-Level
OL On-Site Storage Containers, Low-Level
O Overpacks
SS Soft-Sided/Flexible

S Soil
TA Type A Containers
TB Type B Containers
TC Type C Containers

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (CO, D, OL, O, TA, TB)
Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (LS, OL)
F.N. Anderson & Assoc., Forest, VA (SF, CS, TA, TB)
AVANTech, LLC, Knoxville, TN (CR, CO, DL, G, HI, LI, IA, LS, OH, OL, O, TA)
AVANTech, LLC, Columbia, SC (CR, CO, DL, G, HI, LI, IA, LS, OH, OL, O, TA)
Campoverde srl, Milano, Italy (GA)
Coastal Network, Inc., Charlottesville, VA (D, LS)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (LI)
Container Products Corp., Wilmington, NC (B, IA, LS, OL, O, S, TA)
✦Container Technologies Industries, LLC, Helenwood, TN (B, CR, CO, G, HI, LI, IA, LS, OH, O, TA, TB, TC)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (SF)
Dubose National Energy Services, Inc., Clinton, NC (B, CR, SF, CS, CO, D, GS, OL, O)
Dufrane Nuclear Shielding Inc., Winsted, CT (CR, DL, D, GA, GS, HI, LI, LS, OH, OL, O, TA, TB)
Enercon Services, Inc., (Talisman Div.), Kennesaw, GA (SF, CS)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (CS)
✦EnergySolutions LLC, Salt Lake City, UT (CR, SF, CS, CO, D, HI, LI, OH, OL, SS, TA, TB)
Energy Steel, Lapeer, MI (SF, CS, OH)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (B, OH, OL, O)
Framatome Inc., (North American Headquarters), Lynchburg, VA (O)
Frontier Technology Corp., Xenia, OH (TA)
FuseRing.com, London, Ontario, Canada (CS)
Glidewell Specialties Foundry Co., Calera, AL (CR)
GNS Gesellschaft fur Nuklear-Service mbH, Essen, Germany (SF, CS)
Thomas Gray & Associates, Inc., (Owner of Environmental Mgmt. & Controls, Inc.), Orange, CA (DL, D, LS, O, TA)
✦Holtec International, Camden, NJ (CR, SF, CS, OH, OL, O, TA)
✦I.C.E. Service Group, Inc., Moon Township, PA (B, CR, CO, DB, DL, D, LI, IA, LS, O, SS, S, TA)
✦Joseph Oat Corp., Camden, NJ (CR, SF, CS, DL, D, GA, GS, G, LI, IA, LS, OH, OL, O, TA, TB)
See advertisement on page 9
Lancs Industries, Albuquerque, NM (DL, SS)
Leak Testing Specialists, Inc., Orlando, FL (TB)
✦Major Tool & Machine, Inc., Indianapolis, IN (B, CR, SF, CS, CO, OH, OL, O, TA, TB)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (CR, SF, CS, D, GA, GS, G, OH, OL)
✦NAC International Inc., Peachtree Corners, GA (CR, SF, CS, OH, O, TB)
NAC LPT LLC, Sewickley, PA (B, LS, OL, TA)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (CO)
Niagara Energy Products (NEP), Niagara Falls, Ontario, Canada (B, CR, SF, CS, CO, GA, GS, G, OH, OL, O, TA, TB)
NovaTech, Lynchburg, VA (CO)
NuclearConsultants.com, Ann Arbor, MI (SF, CS, O)
Nuclear Shielding Supplies & Service, Tucson, AZ (OH, OL)
NuSource LLC, Alexandria, VA (CR, CO)
✦Orano Federal Services, Charlotte, NC (CR, SF, CS, DL, LI, OH, OL, O, TA, TB)
Orano TN, Columbia, MD (CR, SF, CS, CO, OH, OL, O, TA, TB, TC)
Packaging Research and Design, Brandon, MS (SS)
✦PacTec, Inc., Clinton, LA (B, DL, G, LI, IA, LS, OH, OL, O, SS, S, TA)
See advertisement on page 110
✦Petersen Inc., Ogden, UT (B, CR, SF, CS, LS, OH, OL, O, TA, TB)
See advertisement on Cover 2
Porvair Filtration Group Inc., Ashland, VA (DB)
✦Precision Custom Components, LLC, York, PA (CR, SF, CS, OH)
Premier Technology, Inc., Blackfoot, ID (CR, SF, CS, TA, TB)
Promation Nuclear, Oakville, Ontario, Canada (CR, TA, TB)
PTP Spent Fuel Services, LLC, Grand Island, NY (CR, SF, CS, OH, OL)
Radiation Safety & Control Services, Inc., Seabrook, NH (GA, TA)
Radium Inc., Waynesboro, VA (B, CO, SS)
✦Reef Industries, Inc., Houston, TX (B, DL, LI, LS, OL, O, SS, TA)
Rich Industries Inc., New Philadelphia, OH (DL)
Robatel Technologies, LLC, Roanoke, VA (CR, CO, GA, GS, G, IA, LS, OL, TA, TB)
RSO, Inc./Radiation Service Organization, Laurel, MD (DL, D, LS, TA)
Seafab Metals Co., (Div. of The Doe Run Co.), Casa Grande, AZ (CR, SF, CS, D, OH, OL, O)

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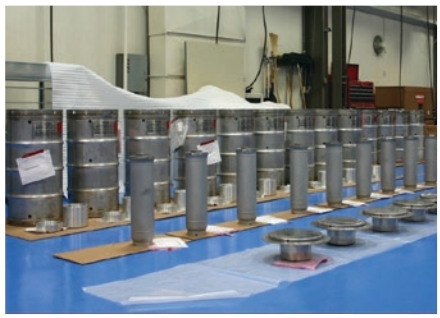
Manufacturing facilities, skill sets & systems, comparable & compatable, with Fortune 500 Companies.
600,000 sq. ft. environmentally controlled
Value through turn-key, horizontal & vertical supply
Cost savings through confidence and consolidation of supply chain management activities.
In-house DCMA Representative

Programs Where We Bring Value:

Gloveboxes & Containment Systems



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- MODIFIED & REFURBISHED CARGO CONTAINERS
- ONSITE PE ENGINEERS
- CUSTOM OVERPACKS
- SHIELDED CONTAINERS
- SKID PANS
- CANISTERS
- CAKE BOX / SPLIT CAVITY CONTAINERS

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J. L. Shepherd & Assoc., San Fernando, CA (GA, GS, O, TA)
Siempelkamp NIS, Alzenau, Germany (CR)
Simpson Gumpertz & Heger (SGH), Chicago, IL (CR, SF, CS)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (CS)
Skolnik Industries, Chicago, IL (D, O, TA)
✦Strategic Packaging Systems, Madisonville, TN (B, CO, DL, IA, LS, O, SS, S)
Studsvik, Inc., Atlanta, GA (CR, LI, LS, S)
Talisman Div. of Enercon, Arlington, VA (CR, SF, CS, OH, OL)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (B, CR, SF, CS, CO, DB, DL, D, GA, GS, G, HI, LI, IA, LS, OH, OL, O, SS, S, TA, TB)
Unified Engineering, Hamilton, Ontario, Canada (B, CR, SF, CS, CO, DL, D, OL, O)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (IA, LS)
Vigor (formerly Oregon Iron Works), Clackamas, OR (CR, SF, CS, G, OH, OL, O, TA, TB)
VTT Technical Research Centre of Finland, VTT, Finland (CR, SF, CS)
Wagstaff Applied Technologies, Spokane, WA (B, CR, SF, CS, CO, DL, GA, GS, HI, LI, OH, OL, O)
Waste Control Specialists LLC, Andrews, TX (B, CR)
Waste Control Systems, Inc., Phoenix, MD (DL, D, HI, IA, LS, O, TA)
Westinghouse Electric Co. LLC, Cranberry Township, PA (CO)
Wheelift Transporters, Waverly, IA (CS)
✦WMG, Inc., Peekskill, NY (CO, LI, IA, LS, OH, OL, TA, TB)
Worthington Industries, Columbus, OH (CR, CS, OH, OL, O, TA, TB)

17650 Corrosion Inhibitors

Cortec Corp., Saint Paul, MN
Fuel Tank Maintenance Co., LLC, Cookeville, TN
Hexion Inc., Columbus, OH
HydroPro Inc., Bourbon, MO
Lambda Technologies, Cincinnati, OH
Lights Camera Action, LLC, Gilbert, AZ
Sentry Equipment, Oconomowoc, WI

17950 Counters, Detectors, Radiation–*also see Monitors*

A Alpha
B Beta
G Gamma
N Neutron
C Combinations of Above
DT Desk-Top
ER Dose Rate, Emergency Range
FS Floor-Standing
FL Flow
GM Geiger-Mueller Type
G Germanium Detectors
IC Ion Chamber Type
IS Ion-Implanted Silicon Detectors
LB Low-Background Alpha/Beta
M Modular
P Portable
PC Proportional Counters
SL Scintillation Counters, Liquid
SR Scintillation Counters, Radioimmunoassay
ST Scintillation Counters, Solid-State
SS Solid-State Semiconductor Type
WT Wipe Test Counters
X X-ray

Alpha Spectra, Inc., Grand Junction, CO (A, B, G, C, LB, SR, ST, WT, X)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (C)
Bevelacqua Resources, Richland, WA (A, B, G, N, C, DT, ER, FS, FL, GM, G, IC, IS, LB, M, P, PC, SL, SR, ST, SS, WT, X)
Bot Engineering Ltd, Campbellville, Ontario, Canada (A, B, G, N, C, ER, FS, FL, IC, M, P, PC, SL, ST, SS, X)
CAEN SyS, Viareggio, LU, Italy (C)
✦EnergySolutions LLC, Salt Lake City, UT (A, B, G, N, ER, GM, G, IC, P, SL, SR)
ENVINET GmbH, Munich/Haar, Germany (G, ER, GM, M, P, PC, ST)
Environmental Restoration Group, Inc., Albuquerque, NM (A, B, G, C, DT, ER, FS, GM, IC, P, PC, WT)
FCI-Fluid Components International LLC, San Marcos, CA (FL)
General Atomics Electromagnetic Systems, San Diego, CA (B, G, ER, GM, IC, P, PC, SL, ST, SS)
GLSEQ, LLC, Huntsville, AL (A, B, G, N, C, LB, P, SS)
Health Physics Instruments, (Div. of Far West Technology, Inc.), Goleta, CA (A, B, G, N, C, GM, IC, P, PC, ST, SS)
H3D, Inc., Ann Arbor, MI (G, N, C, DT, M, P, SS)
Intek, Inc., Westerville, OH (FL)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (A, B, N, ST)
LabLogic Systems, Inc., Tampa, FL (A, B, G, ER, GM, SL)
LND, Inc., Oceanside, NY (A, B, G, N, C, DT, ER, FS, FL, GM, IC, M, P, PC, WT, X)
Mazur Instruments, Castle Rock, CO (C, ER)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (G, N, C, IC, PC)
Mirion Technologies (Premium Analyse), Norroy Le Veneur, France (B)
ORTEC, Oak Ridge, TN (A, B, G, N, C, DT, ER, FS, GM, G, IC, IS, LB, M, P, PC, ST, SS)
OTEK Corp., Tucson, AZ (FL, PC, SS)
Overhoff Technology Corp., (A Div. of US Nuclear Corp.), Milford, OH (A, B, G, IC, PC, SR, WT)
Paragon Energy Solutions, Fort Worth, TX (N)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (A, B, G, C, GM, LB, P, WT)
PHDS Co., Knoxville, TN (G, G, M, P, SS)
Premium Analyse, Norroy Le Veneur, France (B, IC)
Protean Instrument Corp., Knoxville, TN (A, B, LB, PC, WT)
Pylon Electronics Inc., (Div. of Autrex) (Instrumentation Dept.), Ottawa, Ontario, Canada (A, P, WT)
RadComm Systems Corp., Oakville, Ontario, Canada (G, N, C, DT, FS, P)
Radiation Safety & Control Services, Inc., Seabrook, NH (A, B, G, N, ER, GM, IC, LB, PC, SL, SS, WT)
ReNuke, Oak Ridge, TN (A, B, G, N, C, DT, GM, G, IC, LB, M, P, PC, ST)
Rexon Components, Inc., Beachwood, OH (A, B, G, N, C, ER, GM, IC, LB, P, PC, SR, ST, SS, WT, X)
Rolls-Royce Civil Nuclear SAS, Meylan, France (N, IC, PC)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (N, IC, PC)
RSO, Inc./Radiation Service Organization, Laurel, MD (A, B, G, C, GM, IC, P, PC)
S.E. International, Inc., Summertown, TN (A, B, G, C, DT, ER, GM, P, ST, WT, X)
Technical Associates, (US Nuclear Corp.), (Overhoff Technology Corp. Division), Canoga Park, CA (A, B, G, N, C, DT, ER, FS, GM, G, IC, M, P, PC, SL, SR, SS, WT, X)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (A, B, G, N, C, DT, ER, FS, FL, GM, IC, LB, M, P, PC, SL, SR, ST, SS, WT, X)
Vitto Corp., Kanagawa, Japan (G)
Warrington, Inc., Pflugerville, TX (A, B, G, C, GM, IC, P, PC, ST, WT, X)
Westinghouse Electric Co. LLC, Cranberry Township, PA (A, B, G, N, GM)

18590 Crane Safety Systems

AT Anti-Two-Blocking (Conversion)
SF Single-Failure-Proof

American Crane & Equipment Corp., Douglassville, PA (AT, SF)
PAR Systems, LLC, Shoreview, MN (AT, SF)
Simpson Gumpertz & Heger (SGH), Chicago, IL (AT, SF)

18600 Cranes & Hoists

CS Control System Upgrade/Replacement
CO Controls, Radio
CC Cranes, Conventional, to 300-Ton Cap.
CR Cranes, Conventional, to 500-Ton Cap.
CH Cranes, Heavy-Lift, to 1000-Ton Cap.
CX Cranes, Heavy-Lift, to 2500-Ton Cap.
DG Double-Girder, Top-Riding
E Electric
FB Fuel Building Cranes (Cask Handling)
G Gantry
H Hand Chain-Operated
LM Lug-Mounted Hoists
MH Monorail Hoists
RS Radwaste Storage Facility
SG Semi-Gantry
SF Single-Failure-Proof
ST Single-Girder, Top-Riding
SU Single-Girder, Under-Riding
SP Spent Fuel Pool Cranes

American Crane & Equipment Corp., Douglassville, PA (CS, CO, CC, CR, DG, E, FB, G, H, LM, MH, RS, SG, SF, ST, SU, SP)
✦American DND Inc., Grand Island, NY (CR, CX, RS)
Barnhart Nuclear Services, Fairhope, AL (CR, CH, CX, G)
Bigge Power Constructors, (Affl. of Bigge Crane and Rigging Co.), San Leandro, CA (CC, CR, G, SF)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (E, H)
Del Mar Avionics, (Hydra Set Div.), Irvine, CA (SP)
Engineered Rigging, Russellville, AR (CC, CR, CH)
Engineered Rigging, Valparaiso, IN (CC, CR, CH)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CS, FB, SP)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (CS)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (CO)
LGH, Bridgeview, IL (E, G, H, MH)
L Rettinger Energy Technology Solutions, Collier Township, PA (CC, CR, CH, CX)
PAR Systems, LLC, Shoreview, MN (CS, CO, CC, CR, CH, CX, DG, E, FB, G, MH, RS, SG, SF, ST, SU, SP)
PTP Spent Fuel Services, LLC, Grand Island, NY (SP)
Schulz Electric, Timken Power Systems, New Haven, CT (CS, CO, CC, DG, E, G, H, LM, MH, RS, SG, SF, ST, SU, SP)
Simpson Gumpertz & Heger (SGH), Chicago, IL (CC, CR, CH, CX, DG, FB, G, H, LM, MH, RS, SG, SF, ST, SU, SP)
Unified Engineering, Hamilton, Ontario, Canada
Unique Technical Resources, Wayne, PA
Westinghouse Electric Co. LLC, Cranberry Township, PA (CS, FB, SP)

19450 Dampers

AF Air-Flow Control
B Backdraft
F Fire
HE High-Energy Line Break
I Isolation
IA Isolation, Bubble-tight
T Tornado Protection

V Volume

Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (AF, B, F, HE, I, IA, T, V)
ECU Corporation, Cincinnati, OH (AF, B, HE, I, IA, T, V)
Ellis & Watts Global Industries, Inc., Batavia, OH (AF, B, F, I, IA, T, V)
New York Blower Company, Willowbrook, IL (AF)
PMT Nuclear, Woodridge, IL (AF, B, F, HE, I, IA, T, V)
✦SSM Industries, Inc., Pittsburgh, PA (AF, B, F, HE, I, IA, T, V)
Unified Engineering, Hamilton, Ontario, Canada (AF)

19700 Data Acquisition/Handling Systems–*also see Computers*

A Analog
D Digital

Acromag Inc., Wixom, MI (A, D)
AVANTech, LLC, Knoxville, TN (A, D)
AVANTech, LLC, Columbia, SC (A, D)
CAEN SyS, Viareggio, LU, Italy (D)
CHP Consultants/Counts.Pro, Oak Ridge, TN (D)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (A, D)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, D)
General Atomics Electromagnetic Systems, San Diego, CA (A, D)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (D)
Knowledge Relay, Cypress, CA (A)
Mirion Technologies (Canberra) Inc., Meriden, CT (A, D)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (D)
NovaTech, Lynchburg, VA (A, D)
ORTEC, Oak Ridge, TN (D)
Radics LLC, Kropyvnytskyi, Ukraine (D)
Rockwell Automation, Inc., Milwaukee, WI (A, D)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (D)

20000 Data Readout Devices, Terminals & Accessories–*also see Computers*

O Oscillographic
PD Plotters, Digital
PX Plotters, X-Y
P Printers
RC Recording Charts
RP Recording Pens, Disposable
SC Strip Chart Recorders
V Video Display

CHP Consultants/Counts.Pro, Oak Ridge, TN (RC)
GLSEQ, LLC, Huntsville, AL (V)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (RC, SC, V)
Mirion Technologies (Canberra) Inc., Meriden, CT (PD, P, V)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (V)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (O, PD, PX, P, RC, RP, SC, V)

20300 Decommissioning Services

DC Decontamination
DM Demolition
DS Dismantling
E Engineering Support Services
RS Radiological Surveys
SS SAFSTOR
TI Transportation, Intermodal
TR Transportation, Rail

Accelerated Decommissioning Partners - ADP, Dallas, TX (DC, DM, DS, E, RS, TR)
Advanced Consulting Group, Inc., Chicago, IL (DS, E)
Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (DC)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (DM, DS, RS)
✦American DND Inc., Grand Island, NY (DC, DM, DS, E, TI, TR)
See advertisement on page 5
American Integrated Services, Inc., Anaheim, CA (DC, DM, DS, TI)
✦Argonne National Laboratory, (Decommissioning Training), (EOF Div.), Argonne, IL (E)
Artisan Industries Inc., Stoughton, MA (E)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (E)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (E)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (E)
AVANTech, LLC, Knoxville, TN (DC, E)
AVANTech, LLC, Columbia, SC (DC, E)
Barnhart Nuclear Services, Fairhope, AL (DS, TI, TR)
✦Bechtel Nuclear, Security & Environmental, Reston, VA (DC, DM, DS, E)
See advertisement on page 41
Bevelacqua Resources, Richland, WA (DC, E, RS)
BHI Energy, Weymouth, MA (DC, DM, DS, E, RS)
Bigge Power Constructors, (Affl. of Bigge Crane and Rigging Co.), San Leandro, CA (DS, E)
Black & Veatch, Overland Park, KS (E)
Bluegrass Concrete Cutting, Inc., Greenville, AL (DC, DM, DS)
Boston Government Services, LLC (BGS), Oak Ridge, TN (E)
✦Brokk Inc., Santa Fe, NM (DS)
Burns & McDonnell, Kansas City, MO (E, RS)
BWX Technologies, Inc., Lynchburg, VA (DC, DM, DS)
Cabrera Services Inc., East Hartford, CT (DC, DS, E, RS)
Central Research Laboratories, Red Wing, MN (DC)
Chase Environmental Group, Inc., Troy, IL (DC, DS, E, RS)
Chesapeake Nuclear Services, Inc., Annapolis, MD (RS)
CS-2 Inc., Grand Island, NY (E)
Day & Zimmermann, Philadelphia, PA (DC)
The Delphi Groupe, Inc., Austin, TX (DC)
Dufrane Nuclear Shielding Inc., Winsted, CT (DC, DS, E, SS)
DW James Consulting, North Oaks, MN (E)
E. H. Wachs, Lincolnshire, IL (DS, E)
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY (DC, DM, DS)
Enercon Services, Inc., (Talisman Div.), Kennesaw, GA (DC, DS, E, RS, SS, TI, TR)
✦EnergySolutions LLC, Salt Lake City, UT (DC, DM, DS, E, RS, SS, TI, TR)
Energy Steel, Lapeer, MI (E)
Environmental Alternatives, Inc., Swanzey, NH (DC)
Environmental Restoration Group, Inc., Albuquerque, NM (RS)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (DC, DS, E, RS, SS)
EXCEL Services Corporation, Rockville, MD (E)
Fluor, Arlington, VA (DC, DM, DS, E)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (DC, DM, DS, E)
Hennigan Engineering LLC, Hingham, MA (DC)
High Bridge Assoc., (Meridian Services Group), Chattnooga, TN (E)
Hopewell Designs, Inc., Alpharetta, GA (DS)
H3D, Inc., Ann Arbor, MI (RS)
✦I.C.E. Service Group, Inc., Moon Township, PA (E, TI, TR)
Imperia Engineering Partners LLC, Bordentown, NJ (E)



For more information on I.C.E. project support contact: **Dennis Morgan -dmorgan@iceservicegroup.com I 412.916.5710**

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- Low Pressure Turbine Rotor Replacement Project – On-site Support Personnel/Packaging/Heavy-Haul Transport (supported both the Spring 2020 outage and Fall 2020 outages
- Nuclear Power Plant D&D – On-site Support Personnel/Packaging/Rail Transport in New England Area
- Nuclear Power Plant D&D – On-site Support Personnel/Packaging/Rail Transport in South Eastern USA
- Nuclear Power Plant Outage Support - Polar Crane Packaging/Transport and Disposal

DELIVERING SUCCESS

SPS
STRATEGIC PACKAGING SYSTEMS
www.spsonline.biz

- Commercial D&D Project Support Packaging Design and Support in the North East
- DOE Project - Packaging Design and Support Nationwide
- FUSRAP Project Packaging Design and Support in the North East
- New Products & Services - Introducing the Macro Encapsulation Bag to the Radioactive Waste Industry
- Nuclear Power Plant D&D Packaging Design and Support in the North East

For more information on SPS project support contact: **Tim Blythe - tblythe@iceservicegroup.com I 724.312.1757**



In-Place Machining Company, LLC, Batavia, OH (DS)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (DC)
Kinectrics Inc., Toronto, Ontario, Canada (DC, E, RS)
Manafort Brothers Inc., Plainville, CT (DC, DM)
Matom Ltd., North Wales, United Kingdom (E, RS)
Mega-Tech Services, LLC, Cooksburg, PA (E)
NAC LPT LLC, Sewickley, PA (TI, TR)
Navarro Research and Engineering, Inc., Oak Ridge, TN (DC, DM, DS, E, RS)
NovaTech, Lynchburg, VA (E)
Nuclear-21, Waasmunster, Belgium (DC)
NV5/Dade Moeller, Richland, WA (DC, RS)
Onet Technologies, (Sub. of Onet SA Marseille-France), Marseille, France (DC, DS)
Orano Decommissioning Services, Hudson, MA (DC, DM, DS, E, RS, TR)
✦Orano Federal Services, Charlotte, NC (DC, DM, DS, E, RS, TR)
Orano TN, Columbia, MD (TI, TR)
Paschal Solutions, Inc., Knoxville, KY (E)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (DM)
PHDS Co., Knoxville, TN (RS)
Plant Decommissioning, Lake Villa, IL (DS, E)
Promation Nuclear, Oakville, Ontario, Canada (E)
PTP Spent Fuel Services, LLC, Grand Island, NY (DC, E, TI, TR)
Radiation Safety & Control Services, Inc., Seabrook, NH (DC, DM, DS, E, RS, SS, TI, TR)
Red Wolf Associates, Cary, NC (E)
RETAQS, Inc., Blue Bell, PA (E)
Robatel Technologies, LLC, Roanoke, VA (E)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (E)
RSO, Inc./Radiation Service Organization, Laurel, MD (DC, RS)
Sargent & Lundy, Chicago, IL (E)
Siempelkamp NIS, Alzenau, Germany (DC, DS, E)
Simpson Gumpertz & Heger (SGH), Chicago, IL (DM, DS, E)
Sonic Systems International, Inc., Houston, TX (E)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (DS, E)
3 Bears Technical Services, LLC, Hixson, TN (DC, E)
✦Underwater Construction Corp., Essex, CT (DC, DS)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (DM, DS, E, RS)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (DC, DS)
US Ecology, Inc., Livonia, MI (DC)
VTT Technical Research Centre of Finland, VTT, Finland (DS, E)
Waste Control Specialists LLC, Andrews, TX (TI, TR)
Westinghouse Electric Co. LLC, Cranberry Township, PA (DC, DS, E, RS, SS, TI, TR)
✦WMG, Inc., Peekskill, NY (DC, DS, E, RS)
Wolfgang Waelischmiller Solutions, München, Germany (DS)
Wood, (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group), Grand Junction, CO (DC, DM, DS, E, RS)

20350 Decontamination Chemicals, Equip. & Services–*also see Cleaning Equip.; Health Physics Equip.*

AC Abrasive Cleaning
CD Chemical Decontamination
C Chemicals
CS Concrete Scabbling
CR Cryogenic Cleaning (CO2)
D Drainline
EP Electropolishing
E Equipment
HS Hand Scrubbing
HF High-Pressure Freon
HW High-Pressure Water
IB Ice Blasting (Wet Ice)
LD Laser Decontamination
PS Plugs & Seals
S Services
SW Soil Washing
SC Strippable Coatings
UW Ultra-High-Pressure Water
U Ultrasonics
VB Vacuum Blasting, Abrasive
VF Vibratory Finishing

Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (CD, S)
✦American DND Inc., Grand Island, NY (CS, HS, S, UW)
American Integrated Services, Inc., Anaheim, CA (AC, CS)
Arkema Inc., (formerly ATOFINA Chemicals, Inc.), King of Prussia, PA (C)
BHI Energy, Weymouth, MA (AC, CS, D, E, HS, HW, S, SC, UW)
✦Brokk Inc., Santa Fe, NM (CS)
Chase Environmental Group, Inc., Troy, IL (AC, CS, HS, HW, S)
Coastal Network, Inc., Charlottesville, VA (C, SC)
Container Products Corp., Wilmington, NC (E)
The Delphi Groupe, Inc., Austin, TX (S)
Dominion Engineering, Inc., Reston, VA (CD, U)

✦EnergySolutions LLC, Salt Lake City, UT (CS, S, SW)
Environmental Alternatives, Inc., Swanzey, NH (AC, CD, CS, CR, HW, S, U)
Foss Therapy Services, Inc., North Hollywood, CA (S)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AC, CD, HS, HW, S, SC, UW, VB)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (AC, CD, C, CS, CR, HS, HW, S, SC, UW)
Geovariances, Avon, France (S)
Heat Exchanger Products Corp. (HEPCO), Hingham, MA (PS)
Hennigan Engineering LLC, Hingham, MA (HW, UW)
Kinectrics Inc., Toronto, Ontario, Canada (CD, C, S)
✦Marshallton Research Laboratories, Inc., King, NC (C)
Matom Ltd., North Wales, United Kingdom (CD)
Mega-Tech Services, LLC, Cooksburg, PA (E)
New Millennium Nuclear Technologies International, Lakewood, CO (CS)
North Wind Group, Idaho Falls, ID (CD)
Nuclear-21, Waasmunster, Belgium (AC, CD, CR, EP, E, LD, S, U)
Onet Technologies, (Sub. of Onet SA Marseille-France), Marseille, France (AC, CD, C, CS, CR, D, EP, E, HS, HW, IB, LD, PS, S, SW, SC, UW, U, VB, VF)
✦Orano Federal Services, Charlotte, NC (AC, CD, CS)
PAR Systems, LLC, Shoreview, MN (E, HW, LD, UW)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (S, SW)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (PS)
Promation Nuclear, Oakville, Ontario, Canada (SC)
Radiological Solutions Inc., Rockdale, IL (EP)
RSO, Inc./Radiation Service Organization, Laurel, MD (S)
Schulz Electric, Timken Power Systems, New Haven, CT (CR, HW, S)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (AC, E, HW)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (AC, CR, E, HS, HW, S, VB)
US Ecology, Inc., Livonia, MI (CD, UW, VB)
Westinghouse Electric Co. LLC, Cranberry Township, PA (AC, CD, C, D, E, HW, S, UW, U)
✦WMG, Inc., Peekskill, NY (S)

20700 Demolition and Dismantlement

American Integrated Services, Inc., Anaheim, CA
Bluegrass Concrete Cutting, Inc., Greenville, AL
BWX Technologies, Inc., Lynchburg, VA
Campoverde srl, Milano, Italy
Chase Environmental Group, Inc., Troy, IL
Manafort Brothers Inc., Plainville, CT
Navarro Research and Engineering, Inc., Oak Ridge, TN
PAR Systems, LLC, Shoreview, MN
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN
Siempelkamp NIS, Alzenau, Germany
Simpson Gumpertz & Heger (SGH), Chicago, IL
US Ecology, Inc., Livonia, MI

21270 Detector Heads, Sold Separately

BF BF3 Neutron Counters
GM Geiger-Mueller Tubes/Probes
HN He3 Neutron Counters
IC Ionization Chambers
PM Photomultiplier Tubes
PC Proportional Counters
SP Self-Powered Type
SL Scintillation Counters, Liquid
ST Scintillation Counters, Solid-State
SS Solid-State Semiconductor Type

Alpha Spectra, Inc., Grand Junction, CO (PM, ST)
ENVINET GmbH, Munich/Haar, Germany (GM, PC, SP, ST)
Health Physics Instruments, (Div. of Far West Technology, Inc.), Goleta, CA (BF, GM, HN, IC, PC, ST)
LND, Inc., Oceanside, NY (BF, GM, HN, IC, PC, SL, ST)
Mirion Technologies, Inc., Atlanta, GA (BF, GM, IC, PC, SP)
Mirion Technologies (Premium Analyse), Norroy Le Veneur, France (IC)
ORTEC, Oak Ridge, TN (PM, ST, SS)
Overhoff Technology Corp., (A Div. of US Nuclear Corp.), Milford, OH (IC)
Paragon Energy Solutions, Fort Worth, TX (BF)
PHDS Co., Knoxville, TN (SS)
Rolls-Royce Civil Nuclear SAS, Meylan, France (IC, PC, SP)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (IC, PC, SP)
Technology for Energy Corp., Knoxville, TN (PC)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (BF, GM, HN, IC, PM, PC, SP, SL, ST, SS)

21300 Detectors, Accelerator Beam

Mirion Technologies, Inc., Atlanta, GA
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA

21310 Detectors, Aerosol/Particulate

ENVINET GmbH, Munich/Haar, Germany
Mirion Technologies, Inc., Atlanta, GA

21320 Detectors, Air Bubble (In Liquid)

Framatome Inc., (North American Headquarters), Lynchburg, VA

21370 Detectors, Explosives–*also see Equipment Rental*

H Hand-Held
W Walk-Through

GLSEQ, LLC, Huntsville, AL (H)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (H)

21400 Detectors, Leak–*also see Tape, Moisture-Sensitive*

A Acoustic
B Bubble Test
EC Electron Capture (SF/6)
G Gas
HE HEPA Filter
IL Integrated Leak Rate Testing
MS Mass Spectrometer (He)
PC Pressure Change

Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (HE)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, G, IL, MS, PC)
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (A)

22200 Detectors, Valve Position

Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
Paragon Energy Solutions, Fort Worth, TX
Technology for Energy Corp., Knoxville, TN

22410 Dewatering Systems & Supplies–*also see Waste Mgmt. Services*

AVANTech, LLC, Knoxville, TN
AVANTech, LLC, Columbia, SC
Framatome Inc., (North American Headquarters), Lynchburg, VA
North Wind Group, Idaho Falls, ID
✦PacTec, Inc., Clinton, LA
Westinghouse Electric Co. LLC, Cranberry Township, PA

22430 Diaphragms, Storage Tank

Corrosion Control Services, Inc., (CCSI Engineered Diaphragm Div.), Davenport, IA
Vigor (formerly Oregon Iron Works), Clackamas, OR

22700 Diving Services

CB Cutting/Burning
D Decontamination
EI Equipment Installation/Realignment
G Grouting
I Inspection
M Maintenance
MJ Metals Joining (Other Than Welding)
WD Welding, Dry Box
WW Welding, Wet

AVANTech, LLC, Knoxville, TN (D)
AVANTech, LLC, Columbia, SC (D)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (D)
Onet Technologies, (Sub. of Onet SA Marseille-France), Marseille, France (CB, D, I, M)
Promation Nuclear, Oakville, Ontario, Canada (D)
PROTEM USA, Evergreen, CO (CB, M, WD)
TEiC, Duncan, SC (EI, M)
✦Underwater Construction Corp., Essex, CT (CB, D, EI, G, I, M, MJ, WD, WW)

See advertisement on Cover 4

Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (CB, D, EI, G, I, M, MJ, WD, WW)

24170 Dryers, Wet Solids–*also see Radioactive Waste Handling & Treatment Equipment*

AVANTech, LLC, Knoxville, TN
AVANTech, LLC, Columbia, SC
Vigor (formerly Oregon Iron Works), Clackamas, OR
Wyssmont Co., Fort Lee, NJ

25000 Electronic Instrumentation & Supplies–*also see Analysis*

Automation Products, Inc., (Dynatrol® Div.), Houston, TX
Bot Engineering Ltd, Campbellville, Ontario, Canada
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
Framatome Inc., (North American Headquarters), Lynchburg, VA
General Atomics Electromagnetic Systems, San Diego, CA
LND, Inc., Oceanside, NY
ORTEC, Oak Ridge, TN
OTEK Corp., Tucson, AZ
Rockwell Automation, Inc., Milwaukee, WI
Rolls-Royce Civil Nuclear, Warrington, United Kingdom
Rolls-Royce Civil Nuclear SAS, Meylan, France
Rolls-Royce Nuclear I&C, Pittsburgh, PA
Rosemount Nuclear Instruments, Inc., Chanhassen, MN
Westinghouse Electric Co. LLC, Cranberry Township, PA
Yokogawa Corporation of America, Newnan, GA

25250 Emergency Response Equipment

RD Radiation Detection/Survey Meters

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (RD)
AVANTech, LLC, Knoxville, TN (RD)
AVANTech, LLC, Columbia, SC (RD)
BHI Energy, Weymouth, MA (RD)
Bot Engineering Ltd, Campbellville, Ontario, Canada (RD)
Cabrera Services Inc., East Hartford, CT (RD)
Chesapeake Nuclear Services, Inc., Annapolis, MD (RD)
ENVINET GmbH, Munich/Haar, Germany (RD)
Environmental Restoration Group, Inc., Albuquerque, NM (RD)
Framatome Inc., (North American Headquarters), Lynchburg, VA (RD)
Frham Safety Products, Inc., Nashville, TN (RD)
GLSEQ, LLC, Huntsville, AL (RD)
H3D, Inc., Ann Arbor, MI (RD)
✦I.C.E. Service Group, Inc., Moon Township, PA (RD)
LabLogic Systems, Inc., Tampa, FL (RD)
ORTEC, Oak Ridge, TN (RD)
Radiation Safety & Control Services, Inc., Seabrook, NH (RD)

25300 Emergency Warning Systems (Public)–*also see Communications*

SE Sirens, Electronic
SM Sirens, Mechanical
SR System Readiness Reporting Systems
TC Telephonic, Computerized
TA Tone Alerting Radios
V Voice Alert (Public Address)

ARES Security Corp., Vienna, VA (SR)
BHI Energy, Weymouth, MA (SE, TC)
Bot Engineering Ltd, Campbellville, Ontario, Canada (TC)
Genave Electronics, Rosemount, MN (SE, SM, SR, TA, V)
PSC Vodec, Nottingham, United Kingdom (V)
Radiation Safety & Control Services, Inc., Seabrook, NH (SE)

25350 Emergency Warning Systems (Worker)

Framatome Inc., (North American Headquarters), Lynchburg, VA

25400 Employment/Personnel Support Services–*also see Consultants*

A Agencies
C Craft Labor Support, Temporary
E Executive Recruitment
FT Full-Time Permanent Personnel
TS Technical, Professional Support, Temporary

✦American DND Inc., Grand Island, NY (C)
F.N. Anderson & Assoc., Forest, VA (FT, TS)
Applied Analysis Corp., Reading, PA (TS)
AVANTech, LLC, Knoxville, TN (TS)
AVANTech, LLC, Columbia, SC (TS)
✦Banda Group International, LLC, Chandler, AZ (TS)
BHI Energy, Weymouth, MA (C, FT, TS)
Boston Government Services, LLC (BGS), Oak Ridge, TN (TS)
CS-2 Inc., Grand Island, NY (A, E, FT, TS)
DCS Systems, Inc., Simsbury, CT (TS)
The Delphi Groupe, Inc., Austin, TX (A, E, FT, TS)
Engineered Rigging, Russellville, AR (C, TS)
Engineered Rigging, Valparaiso, IN (C, TS)
EXCEL Services Corporation, Rockville, MD (TS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, TS)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (C)
Gen IV Nuclear Energy Systems Services, Rockville, MD (TS)
Gilbert Consulting Services, Inc., Arroyo Grande, CA (A, C, E, FT, TS)
GSE Absolute, (Absolute Consulting), Columbia, MD (A, C, E, FT, TS)
GSE Hyperspring, Columbia, MD (A, C, E, FT)
✦I.C.E. Service Group, Inc., Moon Township, PA (TS)
Morson International Inc., (Morson Canada), Toronto, Ontario, Canada (A, E, TS)
Navarro Research and Engineering, Inc., Oak Ridge, TN (FT, TS)
NovaTech, Lynchburg, VA (TS)
NV5/Dade Moeller, Richland, WA (TS)
Radium Inc., Waynesboro, VA (A, C, E, FT, TS)
Sonic Systems International, Inc., Houston, TX (FT, TS)
System One, Pittsburgh, PA (A, C, FT, TS)
TradeWind Services LLC, Richland, WA (A, TS)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (C, TS)
Women in Nuclear Canada, Toronto, Ontario, Canada (E, TS)

25600 Encapsulation, Radioactive Source

Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA
AVANTech, LLC, Knoxville, TN
AVANTech, LLC, Columbia, SC
BWX Technologies, Inc., Lynchburg, VA
Frontier Technology Corp., Xenia, OH
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA
Lucideon, Durham, NC
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada
New Millennium Nuclear Technologies International, Lakewood, CO
Nu-Energy Technologies, Inc., Providence Forge, VA
Waste Control Specialists LLC, Andrews, TX

26080 Environmental Monitoring Equipment–*also see Monitors, Radiation, Area*

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM
Bot Engineering Ltd, Campbellville, Ontario, Canada
Cabrera Services Inc., East Hartford, CT
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
Elcometer Inc., Warren, MI
ENVINET GmbH, Munich/Haar, Germany
Environmental Restoration Group, Inc., Albuquerque, NM
Frham Safety Products, Inc., Nashville, TN
General Atomics Electromagnetic Systems, San Diego, CA
HI-Q Environmental Products Co., Inc., San Diego, CA
ISEC Monitoring Systems, Helsingborg, Sweden
JSM Protective, Inc., Vero Beach, FL
LND, Inc., Oceanside, NY
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL
ORTEC, Oak Ridge, TN
Overhoff Technology Corp., (A Div. of US Nuclear Corp.), Milford, OH
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN
Protean Instrument Corp., Knoxville, TN
RADeCO, Inc., Plainfield, CT
Radiological Solutions Inc., Rockdale, IL
Rockwell Automation, Inc., Milwaukee, WI
Rolls-Royce Civil Nuclear SAS, Meylan, France
Rolls-Royce Nuclear I&C, Pittsburgh, PA

Technical Associates, (US Nuclear Corp.), (Overhoff Technology Corp. Division), Canoga Park, CA
✦Teledyne Brown Engineering, Inc., Huntsville, AL
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA

26100 Environmental Monitoring Services–*also see Health Physics Serv.; Rad. Monitoring Serv.*

✦Banda Group International, LLC, Chandler, AZ
See advertisement on page 34
BHI Energy, Weymouth, MA
Cabrera Services Inc., East Hartford, CT
Chase Environmental Group, Inc., Troy, IL
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY
ENVINET GmbH, Munich/Haar, Germany
Environmental Restoration Group, Inc., Albuquerque, NM
Framatome Inc., (North American Headquarters), Lynchburg, VA
Frham Safety Products, Inc., Nashville, TN
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC
Navarro Research and Engineering, Inc., Oak Ridge, TN
New Millennium Nuclear Technologies International, Lakewood, CO
NV5/Dade Moeller, Richland, WA
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN
RSO, Inc./Radiation Service Organization, Laurel, MD
Sargent & Lundy, Chicago, IL
✦Teledyne Brown Engineering, Inc., Huntsville, AL
VTT Technical Research Centre of Finland, VTT, Finland

26230 Equipment Rental

AC Air Conditioning
C Chillers
CN Containers
CT Cooling Towers
DE Detectors, Explosives
DW Detectors, Weapons
H Hydraulic Systems
IR Instruments, Radiation Detection
RL Radiochemistry Labs, Mobile
RV Remote-Operated Vehicles
S Scaffolding
SC Spot-Coolers
UC Underwater Cameras
VA Vacuum Systems (HEPA Filtered)
VT Valve Testers (Off-Line)
VS Ventilation Systems, HEPA Filtered
VI Video Inspection Systems
WB Whole-Body Counting Units

Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (CN)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (DE, IR, RV)
✦American DND Inc., Grand Island, NY (S)
Artisan Industries Inc., Stoughton, MA (VA)
BAUER Equipment America, Conroe, TX (H, RV)
BHI Energy, Weymouth, MA (S)
✦Brokk Inc., Santa Fe, NM (RV)
Camfil USA, Washington, NC (VA, VS)
CHP Consultants/Counts.Pro, Oak Ridge, TN (IR, WB)
Curtiss-Wright EST Group, Hatfield, PA (H)
EFCO USA, Inc., Charlotte, NC (VT)
✦EnergySolutions LLC, Salt Lake City, UT (IR, RL)
Engineered Rigging, Russellville, AR (H, RV)
Engineered Rigging, Valparaiso, IN (H, RV)
Environmental Restoration Group, Inc., Albuquerque, NM (IR)
Framatome Inc., (North American Headquarters), Lynchburg, VA (VT)
✦I.C.E. Service Group, Inc., Moon Township, PA (CN)
InterTest, Inc., Columbia, NJ (UC, VI)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (DE, DW, IR)
Lenox Instrument Co., Inc., Trevose, PA (VI)
LGH, Bridgeview, IL (H)
Lights Camera Action, LLC, Gilbert, AZ (UC)
Master-Lee Engineered Products Inc., Latrobe, PA (UC)
Mirion Technologies (Canberra) Inc., Meriden, CT (IR, RL, WB)
NUCON International, Inc., Columbus, OH (VS)
Onet Technologies, (Sub. of Onet SA Marseille-France), Marseille, France (RV, UC, VA)
ORTEC, Oak Ridge, TN (IR)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (IR)
Radiation Safety & Control Services, Inc., Seabrook, NH (IR)
Radium Inc., Waynesboro, VA (RV, UC, VI)
RSO, Inc./Radiation Service Organization, Laurel, MD (IR)
Technical Associates, (US Nuclear Corp.), (Overhoff Technology Corp. Division), Canoga Park, CA (RL)
Transco Products Inc., Streator, IL (IR)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (RV, VI)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (IR)
Westinghouse Electric Co. LLC, Cranberry Township, PA (CT)

26240 Equipment Sales, Surplus

AVANTech, LLC, Knoxville, TN
AVANTech, LLC, Columbia, SC
Barnhart Nuclear Services, Fairhope, AL
BAUER Equipment America, Conroe, TX
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID
Plant Decommissioning, Lake Villa, IL
Thorburn Flex Inc., Pointe-Claire, Quebec, Canada
UKM Management Consulting, Brampton, Ontario, Canada

26600 Fall Protection Equipment & Devices, Construction & Maintenance

Frham Safety Products, Inc., Nashville, TN

26900 Fasteners

B Bolts
CG Commercial Grade Dedication
N Nuts
QT Quick Throw
S Studs
TR Threaded Rod
W Washers

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (B, N, QT, S, TR, W)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (B, N, S, TR, W)
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH (B, N, S, TR, W)
Dubose National Energy Services, Inc., Clinton, NC (B, N, S, TR, W)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (B, N, S, TR, W)
Framatome Inc., (North American Headquarters), Lynchburg, VA (B, N, S, TR, W)
Mirion Technologies, Inc., Atlanta, GA (B, S, TR)
Niagara Fasteners Inc., Niagara Falls, Ontario, Canada (B, N, QT, S, TR, W)
Nord-Lock Inc., Clinton, PA (B, N, S, TR, W)
NuSource LLC, Alexandria, VA (B, N, S)
PMT Nuclear, Woodridge, IL (B, N, S, TR, W)
Simpson Gumpertz & Heger (SGH), Chicago, IL (B, CG, N, S, TR, W)
T&T Enterprises, Corona, CA (B, N, S, TR, W)
Tioga Pipe Supply Co., Inc., Philadelphia, PA (B, N, S, TR, W)
Westinghouse Electric Co. LLC, Cranberry Township, PA (B, N, S, TR, W)

26910 Feedthroughs, Bulkhead–*also see Sleeves, Wall*

E Electrical
F Fiber Optic

Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (E, F)
Mirion Technologies, Inc., Atlanta, GA (E, F)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (E, F)
SCHOTT Electronic Packaging, (A Div. of SCHOTT North America, Inc.), Southbridge, MA (E, F)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (E, F)

26970 Fiber Optic Components & Systems–*also see Cable; Connectors; Feedthroughs; Remote-Viewing*

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
Framatome Inc., (North American Headquarters), Lynchburg, VA
Mirion Technologies, Inc., Atlanta, GA
SCHOTT Electronic Packaging, (A Div. of SCHOTT North America, Inc.), Southbridge, MA
Ultra Electronics, Energy, Round Rock, TX

27180 Filter Housings

B Bag In/Bag Out
M Manual Changeout
R Remote Changeout
SA Side Access
W Walk-In

AVANTech, LLC, Knoxville, TN (B, M, R)
AVANTech, LLC, Columbia, SC (B, M, R)
Central Research Laboratories, Red Wing, MN (B, M, R)
ECU Corporation, Cincinnati, OH (B, M, SA, W)
Ellis & Watts Global Industries, Inc., Batavia, OH (B, M, R, SA, W)
NuSource LLC, Alexandria, VA (B, M)
PMT Nuclear, Woodridge, IL (B, M, R, SA, W)
Radiological Solutions Inc., Rockdale, IL (M)
✦SSM Industries, Inc., Pittsburgh, PA (B, M, SA, W)
Tri Nuclear Corp., Ballston Lake, NY (M, R)

27450 Filters–*also see Containers*

A Air
C Carbon
CL Cloth, Straining
DE Debris
D Disposable
HE HEPA
HY Hydraulic
LO Lubricating Oil
SB Stainless Steel, Porous, Backwash
SU Stainless Steel, Porous, Backwash, Ultrasonic
SP Stainless Steel, Porous, Blowback
SS Stainless Steel, Sintered
TF Thin-Film
U Ultrafiltration
V Vacuum (HEPA)
W Water (Conventional)
WP Water Purification
WS Water/Steam, High-Pressure
X X-ray

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (SB, SU, SP, SS)

F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

world Class Instruments!

Company Profile

High Volume Air Samplers

World Calibrator

Light Weight Low Volume Air Samplers

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 combines advances in hardware and software technologies to simplify the data collection 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

ISO AMERICAN GLOBAL STANDARDS 17025 CERTIFIED

TUV NORD TUV USA Inc. ISO 9001

Tel: 352.680.1177 fandj@fjspecialty.com www.fjspecialty.com

F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

F&J Advanced-Technology Instruments

GAS-22

Low Volume REMP
Air Sampler System

DF-75L-400-Li

Indoor/Outdoor
Emergency Response Air Sampler
Ruggedized Enclosure

DF-ERHV-DT

High Volume
Emergency Response
Air Sampling System

FJ-46P/ FJ-40SS

Filter Holders

Filter Media

MCE Membrane Assortment, Glass Fiber,
Qualitative and Quantitative Media

RICF

Radioiodine Collection Filter Cartridges

Tel: 352.680.1177 / Fax: 352.680.1454 / fandj@fjspecialty.com / www.fjspecialty.com

Arkema Inc., (formerly ATOFINA Chemicals, Inc.), King of Prussia, PA (C)
Artisan Industries Inc., Stoughton, MA (TF)
AVANTech, LLC, Knoxville, TN (C, DE, D, LO, SB, U, W, WP)
AVANTech, LLC, Columbia, SC (C, DE, D, LO, SB, U, W, WP)
BHI Energy, Weymouth, MA (A, C, HE)
CeraMem LLC, (Sub. of Alsys Group), Waltham, MA (U)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (SB, WS)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (A, C, HE, V)
Dominion Engineering, Inc., Reston, VA (SU, WP)
Ellis & Watts Global Industries, Inc., Batavia, OH (A, C, HE)
✦EnergySolutions LLC, Salt Lake City, UT (DE, D, U, W, WP)
✦F&J SPECIALTY PRODUCTS, INC., Ocala, FL (A)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, D, U, W, WP, WS)
Frham Safety Products, Inc., Nashville, TN (A, C, D, HE, V)
Graver Technologies Inc., (A member of The Marmon Group of Companies), Glasgow, DE (C, D, SB, U, W, WP)
Graver Water Systems, LLC, Warren, NJ (W, WP)
HI-Q Environmental Products Co., Inc., San Diego, CA (A, C)
IONEX Research Corp., Lafayette, CO (A, C, HE)
✦Joseph Oat Corp., Camden, NJ (LO, W, WP, WS)
Lancs Industries, Albuquerque, NM (A, D, HE)
✦M. Braun Inc., Stratham, NH (C, D, HE, V, WP)
Mohawk Safety, Manchester, CT (HE, V)
NUCON International, Inc., Columbus, OH (A, C, D, HE, WP)
NuSource LLC, Alexandria, VA (A, CL, D, HE, HY, LO, SB, SU, SP, SS, TF, U, V, W, WP, WS)
✦PacTec, Inc., Clinton, LA (CL)
Paragon Energy Solutions, Fort Worth, TX (A, W)
PMT Nuclear, Woodridge, IL (A, C, D, HE, V, W, WP)
Porvair Filtration Group Inc., Ashland, VA (A, C, DE, D, HE, HY, LO, SB, SU, SP, SS, WS)
RADeCO, Inc., Plainfield, CT (C)
Radiation Safety & Control Services, Inc., Seabrook, NH (A, C)
Radiological Solutions Inc., Rockdale, IL (W, WP)
Siempelkamp NIS, Alzenau, Germany (A, HE, WP)
Swagelok Company, Solon, OH (A, LO, W)
Tri Nuclear Corp., Ballston Lake, NY (C, D, SB, W, WP)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (D, W)

27650 Filters, Neutron (CdS)–*also see Neutron Absorbers*

NuSource LLC, Alexandria, VA

30040 Fuel Element Consolidation (Spent Fuel)

SE Services
SY Systems

Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (SE, SY)
✦EnergySolutions LLC, Salt Lake City, UT (SE, SY)
Framatome Inc., (North American Headquarters), Lynchburg, VA (SE, SY)
✦NAC International Inc., Peachtree Corners, GA (SE, SY)
NuclearConsultants.com, Ann Arbor, MI (SE, SY)
Studsvik Scandpower, Wilmington, NC (SE)
Westinghouse Electric Co. LLC, Cranberry Township, PA (SE, SY)

30500 Fuel Handling Equipment & Systems

CC Computer Control Systems
FT Fuel Transfer Equipment
IP In-Pile Inspection & Manipulation
QC Quick Closures, Fuel Transfer Tube
R Refueling Equipment
RS Refueling Shielding
SP Service Platform Modification/Upgrade

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (IP)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (R)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (R)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (R)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CC, FT, IP, QC, R)
✦EnergySolutions LLC, Salt Lake City, UT (FT)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CC, FT, IP, R, RS, SP)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (FT)
✦Holtec International, Camden, NJ (FT, R, SP)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (SP)
✦Major Tool & Machine, Inc., Indianapolis, IN (R)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (RS)
Master-Lee Engineered Products Inc., Latrobe, PA (R)
✦NAC International Inc., Peachtree Corners, GA (FT)
NovaTech, Lynchburg, VA (IP)
Nuclear Systems Associates, Inc., Brea, CA (FT, IP)
PAR Systems, LLC, Shoreview, MN (CC, FT, IP, QC, R, RS, SP)
Platom Oy, Mikkeli, Finland (FT)
✦Precision Custom Components, LLC, York, PA (R)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (FT, QC, RS, SP)
PTP Spent Fuel Services, LLC, Grand Island, NY (FT)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (CC, FT, IP, QC, SP)
Simpson Gumpertz & Heger (SGH), Chicago, IL (FT, SP)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (FT)
Sonic Systems International, Inc., Houston, TX (IP)
Vigor (formerly Oregon Iron Works), Clackamas, OR (FT, R, RS, SP)
Westinghouse Electric Co. LLC, Cranberry Township, PA (FT, QC, R)

32250 Gas Handling Equipment–*also see Analyzers, Gas; Filters*

A Adsorbers
C Circulators
G Gas Generators
HC Hydrogen Combiners
MP Mixers, Proportioners
OG Off-Gas Treatment Systems
P Purifiers

ECU Corporation, Cincinnati, OH (A, OG)
Ellis & Watts Global Industries, Inc., Batavia, OH (A, OG)
FCI-Fluid Components International LLC, San Marcos, CA (MP)
Framatome Inc., (North American Headquarters), Lynchburg, VA (HC, OG)
GLSEQ, LLC, Huntsville, AL (HC)
IONEX Research Corp., Lafayette, CO (A, OG)
✦M. Braun Inc., Stratham, NH (C, P)
NUCON International, Inc., Columbus, OH (A, G, OG, P)
Porvair Filtration Group Inc., Ashland, VA (OG)
✦SSM Industries, Inc., Pittsburgh, PA (A)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (G, HC)
Westinghouse Electric Co. LLC, Cranberry Township, PA (HC)

36000 Gloveboxes & Accessories–*also see Connectors, Electrical, Glovebox; Filters*

B Base Units
C Containers
D Drain Assemblies
GB Glovebag Containments
GR Glovebag Rings
G Gloves
P Ports

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (B, C, D)
Camfil USA, Washington, NC (GB)
Frham Safety Products, Inc., Nashville, TN (GB, GR, G)
✦Joseph Oat Corp., Camden, NJ (B, C)
✦Major Tool & Machine, Inc., Indianapolis, IN (B, C)
✦M. Braun Inc., Stratham, NH (B, C, D, G, P)
See advertisement on page 33
✦Orano Federal Services, Charlotte, NC (B, GB, GR)
PMT Nuclear, Woodridge, IL (B, C, D, GB)
Premier Technology, Inc., Blackfoot, ID (B, C, P)
Protective Plastics, Inc., Greenville, SC (GB)
Radium Inc., Waynesboro, VA (B, C, GB)
Robatel Technologies, LLC, Roanoke, VA (B, C, D, GB, GR, P)
Simpson Gumpertz & Heger (SGH), Chicago, IL (B, GB)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (B)
Vigor (formerly Oregon Iron Works), Clackamas, OR (B, C)
Vitto Corp., Kanagawa, Japan (G)
Wagstaff Applied Technologies, Spokane, WA (B, C, D, GR, G)

36900 Grouts

Five Star Products, Inc., Shelton, CT
Nuclear Shielding Supplies & Service, Tucson, AZ
Simpson Gumpertz & Heger (SGH), Chicago, IL

37130 Health Physics Equipment & Supplies–*also see Counters; Monitors, Rad.; Resp. Prot.; Samplers*

B Bags
BM Biomedical Radiation-Counting Systems
BC Body Cooling Systems
DM Decon Mats
DT Decon Trailers, Mobile
DC Dosimeter Chargers
DV Dosimeter Vests, Caps, Arm & Leg Bands
DH Dosimeters, High-Range (Mega R)
DP Dosimeters, Personnel
DO Dosimetry Systems, Computerized
DR Dosimetry Systems, Real-Time Remote
DS Drain Socks
EM Emergency Medical Equipment & Supplies
E Enclosures, Radiological Containment (Temporary)
FT Filter Test Equipment
HS Heat Stress Monitors
L Labels, Warning
MS Metalized Sheeting
MT Mops, Roll, Tacky
PR Phantoms, Radiation-Dosimetry
PC Planchet Changers, Automatic
P Planchets, Counting
RT Respirator Tracking Systems
SI Scanners, Isotope Distribution
S Sheeting, Plastic
SW Signs, Warning, Radiation
SS Smears, Swipes
SF Stretch Wrap Film
TW Tapes, Warning
T Tubing, Plastic
WC Wheel Covers
WT Wipers, Tacky

Alpha Spectra, Inc., Grand Junction, CO
BHI Energy, Weymouth, MA (DT, DO, DR, E, T)
CAEN SyS, Viareggio, LU, Italy (DR)

Coastal Network, Inc., Charlottesville, VA (B, DM, DC, DV, DP, E, L, MT, P, S, SW, SS, TW, T, WT)
Dufrane Nuclear Shielding Inc., Winsted, CT (E)
Environmental Alternatives, Inc., Swanzey, NH (DT, E)
Environmental Restoration Group, Inc., Albuquerque, NM (P, SS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (DP, DO, SI)
Frham Safety Products, Inc., Nashville, TN (B, BC, DM, DV, DS, E, MT, P, S, SW, SS, TW, WC, WT)
Graphic Products, Beaverton, OR (L, SW, TW)
HI-Q Environmental Products Co., Inc., San Diego, CA (P)
Hopewell Designs, Inc., Alpharetta, GA (DC)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (DR, SI)
JSM Protective, Inc., Vero Beach, FL (B, DM, S, TW, T, WT)
Lancs Industries, Albuquerque, NM (B, E, L, S, SW, T)
LND, Inc., Oceanside, NY (BM, DH, DP, DR, P)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (EM, E)
✦M. Braun Inc., Stratham, NH (E)
Mirion Technologies (Canberra) Inc., Meriden, CT (BM, DO, PR, PC, P, SI)
Mirion Technologies Dosimetry Services, Irvine, CA (DH)
North Wind Group, Idaho Falls, ID (DP)
Nuclear Technology Services, Inc., Roswell, GA (PR, P)
NV5/Dade Moeller, Richland, WA (HS)
ORTEC, Oak Ridge, TN (BM, PC, P, SI)
✦PacTec, Inc., Clinton, LA (B, DM)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (HS)
Protean Instrument Corp., Knoxville, TN (PC, P, SS)
Protective Plastics, Inc., Greenville, SC (B, MT, S, SS, SF, TW, T)
RADeCO, Inc., Plainfield, CT (DH, DP)
Radiation Safety & Control Services, Inc., Seabrook, NH (DP, DO, DR)
Radium Inc., Waynesboro, VA (BC, HS, RT)
✦Reef Industries, Inc., Houston, TX (DM, DS, SW, TW, T)
ReNuke, Oak Ridge, TN (DC)
Rexon Components, Inc., Beachwood, OH (DP, DO, PR, P)
Rich Industries Inc., New Philadelphia, OH (B, S, SW, SS, TW, T)
RSO, Inc./Radiation Service Organization, Laurel, MD (B, L, P, SW, SS, TW)
S.E. International, Inc., Summertown, TN (DP)
J. L. Shepherd & Assoc., San Fernando, CA (E)
Tech Products, Inc., Staten Island, NY (SW)
Transco Products Inc., Streator, IL (DO)
Ultra Electronics, Energy, Round Rock, TX (DP)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (B, BC, DM, DT, DV, DS, E, MT, S, SW, SS, TW, T, WT)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (BM, DC, DP, DO, DR, SI)
Uticom Systems Inc., Coatesville, PA (L, SW, TW)

37160 Health Physics Equipment & Supplies, Disposable/Soluble

EF Equipment & Floor Covers
MW Mops, Wet
W Wipers

Frham Safety Products, Inc., Nashville, TN (EF, MW, W)
Hopewell Designs, Inc., Alpharetta, GA (EF)
Radiation Safety & Control Services, Inc., Seabrook, NH (EF)

37200 Health Physics Services–*also see Decontamination; Rad. Monitoring Serv.; Waste Mgmt. Serv.*

BF Badge Services, Film
BT Badge Services, TLD
BI Bioassay
BA Breathing Air Quality Analysis
C Calibration
D Dosimetry Services
EI Environmental Impact Analysis
HC Hazard Communication (Employee)
IH Industrial Hygiene Services
IR Industrial Radiology
IT Industrial Toxicology
I In-Plant
L Laboratory Services
LD Laundry Services, Dry Cleaning
LE Laundry Services, Extraction
LW Laundry Services, Wet Wash
MR Medical Review Officer Services
PW Procedures Writing
Q Quality Assurance, Quality Control
RS Radiochemistry Services
RE Radiological Engineering
RI Radioimmunassay Services
RC Regulatory Compliance Support
RF Respirator Fit Testing
RT Respiratory Equipment Cleaning, Repair & Testing
S Surveys
TH Training, Health Physics
TM Training, Maintenance Support
U Urinalysis
WB Whole-Body Counting Services

Applied Analysis Corp., Reading, PA (Q, RE)
Attenuation Environmental Co., Seattle, WA (EI, PW, RE, RC)
Berkeley Nucleonics Corp., San Rafael, CA (C)
Bevelacqua Resources, Richland, WA (EI, TH)
BHI Energy, Weymouth, MA (D, EI, IH, I, PW, Q, RS, RE, RC, RT, S, TH, TM)
Cabrera Services Inc., East Hartford, CT (BI, C, D, EI, IH, L, Q, RS, RE, RC, S, TH)
Chase Environmental Group, Inc., Troy, IL (EI, PW, Q, RE, S, TH)
Chesapeake Nuclear Services, Inc., Annapolis, MD (EI, I, PW, Q, RS, RE, RC, S, TH)
CHP Consultants/Counts.Pro, Oak Ridge, TN (PW)
Decidia Research & Consulting, Sabadell, Barcelona, Spain (EI)
The Delphi Groupe, Inc., Austin, TX (HC, IH, I, PW, Q, RS, RE, RC, TH, TM)
Dufrane Nuclear Shielding Inc., Winsted, CT (RE)
DW James Consulting, North Oaks, MN (RE)
✦EnergySolutions LLC, Salt Lake City, UT (RE, S)
Environmental Restoration Group, Inc., Albuquerque, NM (S, TH)
Exelon PowerLabs, Coatesville, PA (C, D)
Framatome Inc., (North American Headquarters), Lynchburg, VA (BI, D, EI, IR, I, L, Q, RS, RE, RC, WB)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (IH, L, RF)
HealthPhysics.com, Amarillo, TX (D, EI, HC, L, PW, Q, RE, RC, TH)
Health Physics Instruments, (Div. of Far West Technology, Inc.), Goleta, CA (C)
HI-Q Environmental Products Co., Inc., San Diego, CA (BA, C)

Hopewell Designs, Inc., Alpharetta, GA (C)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (IR)
Kinectrics Inc., Toronto, Ontario, Canada (D, L, RS, RE, TM, U)
Materials and Chemistry Laboratory, Inc., (MCLinc), Oak Ridge, TN (L)
Mirion Technologies Dosimetry Services, Irvine, CA (BF)
Navarro Research and Engineering, Inc., Oak Ridge, TN (HC, IH, PW, Q, RE, RC)
North Wind Group, Idaho Falls, ID (BI, BA, EI, IH, TH)
Nuclear Technology Services, Inc., Roswell, GA (BI, C, L, RS, RE, TH, U)
Nucleonova S.L., Valencia, Spain (Q)
NV5/Dade Moeller, Richland, WA (EI, HC, IH, PW, RE, RC, S, TH)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (C)
PHDS Co., Knoxville, TN (RS, RE)
RADeCO, Inc., Plainfield, CT (C)
Radiological Solutions Inc., Rockdale, IL (PW, RC)
Red Wolf Associates, Cary, NC (RE)
RSO, Inc./Radiation Service Organization, Laurel, MD (BI, C, D, L, RI, S, TH, U)
Sargent & Lundy, Chicago, IL (EI, I, PW, Q, RE, RC, TH, TM)
Schulz Electric, Timken Power Systems, New Haven, CT (S)
Southwest Research Institute, San Antonio, TX (EI, RS, TH)
Standish Technologies International, Deerfield Beach, FL (RC)
Technical Management Services, Inc., New Hartford, CT (TH)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (BI, L, RS)
Tetra Tech Inc., Richland, WA (Q, RE, RC, S)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (LD, LE, LW, RC, RF, RT, S)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (C)
✦WMG, Inc., Peekskill, NY (PW, RC)
Wood, (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group), Grand Junction, CO (EI, RE, S)

37600 Heat Exchangers & Equipment–*also see Computer Software*

C Coil
HP Heat Pipe
P Plate/Tube
RF Refacing Equipment (On-Site)
S Shell/Tube
SA Sodium/Air
SS Sodium/Sodium
SW Sodium/Water
W Wet Surface Air Coolers

BWX Technologies, Inc., Lynchburg, VA (S)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (C, HP, P, RF, S)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (C, P, S)
DC Fabricators Inc., Florence, NJ (C, P, S)
Dubose National Energy Services, Inc., Clinton, NC (P, S)
ECU Corporation, Cincinnati, OH (C, P, S)
EFCO USA, Inc., Charlotte, NC (RF)
Ellis & Watts Global Industries, Inc., Batavia, OH (C, S)
Energy Steel, Lapeer, MI (C, P, S)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (C, HP, S)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, P, S, SW, W)
Heat Exchanger Products Corp. (HEPCO), Hingham, MA (P)
Hennigan Engineering LLC, Hingham, MA
Intek, Inc., Westerville, OH (S)
✦Joseph Oat Corp., Camden, NJ (C, S)
NuSource LLC, Alexandria, VA (C, HP, P, S)
Paragon Energy Solutions, Fort Worth, TX (P, S)
Plastocor, Inc., Hingham, MA (S)
PMT Nuclear, Woodridge, IL (C, HP, P, S)
Powerfect Service, Inc., Brick, NJ (S)
Radiological Solutions Inc., Rockdale, IL (C)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (C, HP, P, RF, S, SA, SS, SW, W)
Super Radiator Coils, Chaska, MN (C, P, S, W)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (C, HP, P, S)
Thermal Engineering International (TEi), Cerritos, CA (S, W)
Vigor (formerly Oregon Iron Works), Clackamas, OR (P, S)
Wagstaff Applied Technologies, Spokane, WA (C, HP, P, S)
Watlow, St. Louis, MO (C, S)
Westinghouse Electric Co. LLC, Cranberry Township, PA (S)

39650 Hydraulic Systems & Components–*also see Consultants; Pumps, Other*

Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH
Ellis & Watts Global Industries, Inc., Batavia, OH
PAR Systems, LLC, Shoreview, MN

39960 Imaging, Digital

CS Consulting Services
H Hardware
RS Radiographic Scanning
RT Real-Time
S Software

DimEye Corp., Calabasas, CA (CS, H, RT, S)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CS, H, RS, RT, S)
InterTest, Inc., Columbia, NJ (RT)
ISEC Monitoring Systems, Helsingborg, Sweden (CS, H, RT)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (RT, S)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (CS, H, RS, RT, S)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (RS)

40050 Indicators

F Flow
LF Laminar Flow
LE LEDs
L Level
P Pressure
T Temperature
V Vibration

Automation Products, Inc., (Dynatrol® Div.), Houston, TX (L)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (F, L, P, T)
Exelon PowerLabs, Coatesville, PA (F, LF, LE, L, P, T, V)
FCI-Fluid Components International LLC, San Marcos, CA (F, L, T)
Framatome Inc., (North American Headquarters), Lynchburg, VA (F, L, P, T, V)
Hoffer Flow Controls, Elizabeth City, NC (F)
Intek, Inc., Westerville, OH (F, P, T)
Kanata Electronic Services Ltd., Toronto, Ontario, Canada (T)
KROHNE, Inc., Beverly, MA (F, L, P, T)
LUDECA, Inc., Doral, FL (V)
Magnetrol International, Aurora, IL (L)
✦M. Braun Inc., Stratham, NH (LF)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (L, P)
OTEK Corp., Tucson, AZ (F, L, P, T, V)
Paragon Energy Solutions, Fort Worth, TX (F, L, P, T)
Rockwell Automation, Inc., Milwaukee, WI (F, L, P, T)
Rolls-Royce Civil Nuclear SAS, Meylan, France (P, T)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (P, T)
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (T, V)
Technology for Energy Corp., Knoxville, TN (F)
Westinghouse Electric Co. LLC, Cranberry Township, PA (F, P)
Yokogawa Corporation of America, Newnan, GA (F, L, P, T)

40700 Information Services

Black & Veatch, Overland Park, KS
CHP Consultants/Counts.Pro, Oak Ridge, TN
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID
Nuclear News Magazine, La Grange Park, IL
Radwaste Solutions Magazine, La Grange Park, IL
UxC, LLC, Roswell, GA

40900 Inspection Services–*also see NDT; Video Services*

CR Control Rods & Drives
C Cranes & Hoists
D Dimensional
DS Diaphragms, Storage Tank
EM Electric Motors
EE Electrical, Electromechanical Equipment
FI Fuel, Irradiated
IS In-Service
IA Inspection Agency, ASME Code
MS Microscopy, Scanning
ND Nondestructive Examination
P Pipeline
PS Pipe Supports
Q QA/QC
SI Safety, Industrial
S Siren Systems
SO Solenoids
ST Structures
TP Tanks & Pools
VR Visual, Remote
W Welding
U Underwater, Remote, In-Service

Adam Brown Consulting, Inc., Cary, IL (Q, SI, ST)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (IS, ND, VR, U)
American Crane & Equipment Corp., Douglassville, PA (C)
Anamet, (a Div. of Acuren Inspection, Inc.), Hayward, CA (MS)
Applied Analysis Corp., Reading, PA (EE, Q)
ARES Security Corp., Vienna, VA (VR)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (VR, U)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (VR, U)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (VR, U)
Basic PSA, (Anvil International, LLC), Johnstown, PA (IS)
Black & Veatch, Overland Park, KS (C, P, PS, Q, SI, TP)
Boston Government Services, LLC (BGS), Oak Ridge, TN (Q, W)
BWX Technologies, Inc., Lynchburg, VA (FI, MS, ND)
Corrosion Control Services, Inc., (CCSI Engineered Diaphragm Div.), Davenport, IA (DS, TP)
CS-2 Inc., Grand Island, NY (SI)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (D, EE, ND, Q)
DCS Systems, Inc., Simsbury, CT (Q)
The Delphi Groupe, Inc., Austin, TX (Q, SI)
DimEye Corp., Calabasas, CA (D, VR, U)

Framatome Inc., (North American Headquarters), Lynchburg, VA (CR, D, EE, FI, IS, MS, ND, P, PS, Q, SI, TP, VR, W, U)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (IS, ND, P, TP, W)
GEL Solutions, LLC, (A Member of The GEL Group, Inc.), Charleston, SC (ND)
Genave Electronics, Rosemount, MN (S)
Hennigan Engineering LLC, Hingham, MA (P, VR)
Imperia Engineering Partners LLC, Bordentown, NJ (IA, ND, P, PS)
ISEC Monitoring Systems, Helsingborg, Sweden (VR)
✦Joseph Oat Corp., Camden, NJ (ND, PS, Q, TP, W)
Klein Consulting LLC, Norwich, CT (Q)
Lenox Instrument Co., Inc., Trevose, PA (ND, VR)
Miller Pipeline, Indianapolis, IN (P)
Mirion Technologies (Canberra) Inc., Meriden, CT (ND)
National Inspection & Consultants, Fort Myers, FL (IS, ND, Q)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (PS)
NovaTech, Lynchburg, VA (ND, VR, U)
NUCON International, Inc., Columbus, OH (IS)
NV5/Dade Moeller, Richland, WA (SI)
PAR Systems, LLC, Shoreview, MN (C, EE)
PMT Nuclear, Woodridge, IL (D, Q)
✦Precision Custom Components, LLC, York, PA (D, ND, Q, W)
Radiation Safety & Control Services, Inc., Seabrook, NH (IS, P, PS, ST, TP)
Rockwell Automation, Inc., Milwaukee, WI (EM)
Rogante Engineering Office, Civitanova Marche, Italy (ND)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (CR, C, D, DS, EE, FI, IS, IA, MS, ND, P, PS, Q, SI, S, TP, VR, W, U)
Sargent & Lundy, Chicago, IL (D, IS, PS, Q, TP, VR)
Schulz Electric, Timken Power Systems, New Haven, CT (C, EE, IS, ND)
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (EE)
Simpson Gumpertz & Heger (SGH), Chicago, IL (C, D, IS, IA, MS, ND, P, PS, ST, TP, VR, W, U)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (CR, IS, ND, W)
Southwest Research Institute, San Antonio, TX (ND, TP)
Structural Integrity Assoc., Inc., San Jose, CA (ND, P)
System One, Pittsburgh, PA (IS, IA, ND, P, PS, Q, SI, TP, VR, W)
Tap Report, Toronto, Ontario, Canada (SI)
Teledyne FLIR, Chelmsford, MA (VR)
✦Thermo Scientific - CIDTEC Cameras & Imagers, (Part of Thermo Fisher Scientific), Liverpool, NY (VR)
✦Underwater Construction Corp., Essex, CT (ND, Q, TP)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (IS, ND, Q, ST, TP, VR, U)
Westinghouse Electric Co. LLC, Cranberry Township, PA (CR, EE, FI, IS, ND, P, PS, Q, TP, VR, W, U)
Zetec, Inc., Snoqualmie, WA (IS, ND)

41000 Instrument Services–*also see Calibration Services; Health Physics Services*

Berkeley Nucleonics Corp., San Rafael, CA
Cabrera Services Inc., East Hartford, CT
✦EnergySolutions LLC, Salt Lake City, UT
Equipos Nuclear S.A., S.M.E, Maliaño (Cantabria), Spain
EXCEL Services Corporation, Rockville, MD
Exelon PowerLabs, Coatesville, PA
Framatome Inc., (North American Headquarters), Lynchburg, VA
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX
HI-Q Environmental Products Co., Inc., San Diego, CA
NUCON International, Inc., Columbus, OH
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN
Radiation Safety & Control Services, Inc., Seabrook, NH
Rockwell Automation, Inc., Milwaukee, WI
Rolls-Royce Civil Nuclear, Warrington, United Kingdom
Rolls-Royce Civil Nuclear SAS, Meylan, France
Rolls-Royce Nuclear I&C, Pittsburgh, PA
Volian Enterprises, Inc., Murrysville, PA
VTT Technical Research Centre of Finland, VTT, Finland
Warrington, Inc., Pflugerville, TX

41015 Instrumentation, Misc.

A Analyzer, Total Uranium (Water, Soils, Bioassay)

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (A)

41200 Insulation, Thermal

B Blanket
C Cable
CT Cable Tray
HT High-Temperature
MR Metal Reflective
N Nuclear Quality (Q Materials)
PT Pipe and Tube

Advanced Nuclear LLC, East Petersburg, PA (B, C, CT, HT, MR, N, PT)
C.J. Enterprises, (Div. of C.J. Instruments, Inc.), Tarzana, CA (HT, N)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (N, PT)
Kanata Electronic Services Ltd., Toronto, Ontario, Canada (N)
MillenniTEK, LLC, Knoxville, TN (B, HT)
PMT Nuclear, Woodridge, IL (B, CT, HT, MR, N, PT)

41700 Ion-Exchange Systems, Materials & Services

AVANTech, LLC, Knoxville, TN
AVANTech, LLC, Columbia, SC
Framatome Inc., (North American Headquarters), Lynchburg, VA
NuSource LLC, Alexandria, VA
Rolls-Royce Civil Nuclear, Warrington, United Kingdom
Tri Nuclear Corp., Ballston Lake, NY
Westinghouse Electric Co. LLC, Cranberry Township, PA

44000 Laboratories, Mobile

A Analytical Services, On-Site
E Environmental Analysis

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (A)
Cabrera Services Inc., East Hartford, CT (A, E)
✦EnergySolutions LLC, Salt Lake City, UT (A)
Exelon PowerLabs, Coatesville, PA (A)
Kinectrics Inc., Toronto, Ontario, Canada (A)
Lambda Technologies, Cincinnati, OH (A)

45550 Lights, Lighting

C Construction
E Emergency
HC Hot Cell
L LED
P Pool, Nuclear
PB Portable, Battery-Powered
RF Reactor Floor
U Underwater

BIRNS, Inc., Oxnard, CA (E, HC, P, RF, U)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (E)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (C)
Exelon PowerLabs, Coatesville, PA (E, PB)
Framatome Inc., (North American Headquarters), Lynchburg, VA (E, P, PB, RF, U)
Lights Camera Action, LLC, Gilbert, AZ (C, P, RF, U)
Master-Lee Engineered Products Inc., Latrobe, PA (P, RF, U)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (P, U)
Nuclear Systems Associates, Inc., Brea, CA (E, HC)
Nu-Energy Technologies, Inc., Providence Forge, VA (C, E, P, PB, RF, U)
Premier Technology, Inc., Blackfoot, ID (HC)
Radium Inc., Waynesboro, VA (C, E, HC, P, PB, RF, U)
Sidus Solutions LLC, San Diego, CA (U)

47400 Maintenance & Repair Services–*also see Testing Services*

BM Bolt-Maintenance
BB Bus Bar Insulating (Epoxy Coating)
C Concrete
CO Condenser
CN Construction
CR Control Rod Drives
CT Cooling Towers
CH Cranes & Hoists
DG Diesel Generators
E Electrical Equipment
EJ Expansion Joints
FP Freeze Plugging/Sealing (Pipe)
F Fuel Assemblies
FT Fuel Transfer Equipment
G General
HX Heat Exchangers
HV HVAC Equipment
H Hydraulic Equipment
LC Leak Repair, Concrete
LP Loose Parts Retrieval
MS Mechanical Seals
MO Motors, Electric
OM Outage Management Services
PS Penetration Seals
PI Pipe Cleaning, Internal (Bio-Fouling)
PR Pipe Repair & Replacement
PL Pool Liner Inspection & Repair
PT Post-Tensioning System Surveillance
PA Power Apparatus
PC Protective Coatings
PM Pump & Motor, Main Coolant
PU Pump Inspection & Repair
RM Radiation Measuring Devices & Systems
RS Radiation Shielding
RW Radiation-Shielding Windows
RI Reactor Internals
RF Refueling Equipment
RE Remote Inspection/Repair
RA Rotating Machinery Alignment
RO Rotating Machinery, Vibration Monitoring (Predictive)
SC Screens, Traveling
ST Seal Table/Flux Thimbles
SS Security Systems, Anti-Intrusion
S Snubbers
SF Spent-Fuel Racks
SN Stud/Nut Removal
TC Tank Cleaning, Fuel Storage
TR Trash Racks
TS Tubesheet, Epoxy Cladding
U Underwater Repairs
VA Valve Actuators
VR Valve Repair, Recertification
VO Valve Testing, Off-Line
VT Valve Testing, On-Line
WI Water Intake Cavity Cleaning (Bio-Fouling)

Adam Brown Consulting, Inc., Cary, IL (PS)

Allied Power, Baton Rouge, LA (BM, BB, C, CO, CN, CR, CT, CH, DG, E, EJ, FP, F, FT, G, HX, HV, H, LC, LP, MS, MO, OM, PS, PI, PR, PL, PT, PA, PC, PM, PU, RM, RS, RW, RI, RF, RE, RA, RO, SC, ST, SS, S, SF, SN, TC, TR, TS, U, VA, VR, VO, VT, WI)
Analysis and Measurement Services Corp. (AMS), (Including CHAR Services), Knoxville, TN (CR, E, PM, RM)
Askew Power Generation, Santa Fe Springs, CA (BM)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (BM, RE, SN)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (BM, RE, SN)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (BM, RE, SN)
AVANTech, LLC, Knoxville, TN (TC)
AVANTech, LLC, Columbia, SC (TC)
Barnhart Nuclear Services, Fairhope, AL (CH)
BHI Energy, Weymouth, MA (BM, E, G, H, OM, PR, PM, PU, RF, RE, RA, VR, VO, VT)
Black & Veatch, Overland Park, KS (CN, DG, E, G, HX, HV)
CBS Nuclear Services, Inc., Matthews, NC (E)
CFM/VR-TESCO, LLC Continental Field Machining, Elgin, IL (BM, SN, VR)
Cortec Corp., Saint Paul, MN (C, PC)
Curtiss-Wright EST Group, Hatfield, PA (CO, HX)
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH (BM, RF)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (CO, CT, CH, DG, E, HV, LP, MS, MO, OM, PS, PA, PM, PU, RS, RE, RO, ST, S, VA, VR)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (BM, CR, CH, FT, MO, OM, PS, RF, RE, SF, SN)
Day & Zimmermann, Philadelphia, PA (CN, CT, E, G, HX, MO, OM, PR, PM, PU, SS, S, VA, VO, VT)
Dufrane Nuclear Shielding Inc., Winsted, CT (C, CN, G, RS, RW, TR)
ECU Corporation, Cincinnati, OH (HX, HV)
Electro Static Technology, Mechanic Falls, ME (MS, PM)
Engineered Rigging, Valparaiso, IN (PT)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (BM, CN, CT, CH, HX, HV, MS, PR, RA, SF)
EXCEL Services Corporation, Rockville, MD
Five Star Products, Inc., Shelton, CT (C)
Framatome Inc., (North American Headquarters), Lynchburg, VA (BM, CO, CR, CT, DG, E, F, FT, G, HX, H, LC, LP, MS, MO, OM, PS, PR, PL, PM, PU, RM, RI, RF, RE, RA, RO, SC, ST, SF, SN, TC, TS, U, VA, VR, VO, VT)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (C, CN, CT, EJ, G, HV, LC, PI, PR, PL, PC, TC)
General Atomics Electromagnetic Systems, San Diego, CA (RM)
Health Physics Instruments, (Div. of Far West Technology, Inc.), Goleta, CA (RM)
Heat Exchanger Products Corp. (HEPCO), Hingham, MA (HX, MS)
Hennigan Engineering LLC, Hingham, MA (CO, HX, PI, TC, WI)
Hilman Inc., Marlboro, NJ (G, H, PA)
HydroPro Inc., Bourbon, MO (CO, CT, HX)
Intek, Inc., Westerville, OH (CO)
ISEC Monitoring Systems, Helsingborg, Sweden (RE)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (RM)
JNT Technical Services Inc., Little Ferry, NJ (CO, HX)
Kinectrics Inc., Toronto, Ontario, Canada (C, LC, OM, RS, RO, SC)
KSB, Inc., Henrico, VA (PM, PU, RA)
LUDECA, Inc., Doral, FL (RA, RO)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (RS, RW)
Miller Pipeline, Indianapolis, IN (FP, LC, PR)
Mirion Technologies, Inc., Atlanta, GA (MS, PS, RM)
National Electric Coil, Columbus, OH (DG, E, MO, PA)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (S, VR, VO)
Nord-Lock Inc., Clinton, PA (BM, EJ)
North Wind Group, Idaho Falls, ID (CT, G)
NuVision-HWM, Pittsburgh, PA (RE)
Paragon Energy Solutions, Fort Worth, TX (CO, E, HX, HV, PM, PU)
PAR Systems, LLC, Shoreview, MN (CH, FT, RF, RE, SF, TC)
Pioneer Motor Bearing Co., Kings Mountain, NC (MO, RA, RO)
Plastocor, Inc., Hingham, MA (CO, EJ, HX, PC, TS)
PMT Nuclear, Woodridge, IL (EJ, HX, HV, VA)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (RS, RF)
Premier Technology, Inc., Blackfoot, ID (HX, SF)
Robatel Technologies, LLC, Roanoke, VA (RS)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (BM, BB, C, CO, CN, CR, CT, CH, DG, E, EJ, FP, F, FT, G, HX, HV, H, LC, LP, MS, MO, OM, PS, PI, PR, PL, PT, PA, PC, PM, PU, RM, RS, RW, RI, RF, RE, RA, RO, SC, ST, SS, S, SF, SN, TC, TR, TS, U, VA, VR, VO, VT, WI)
Sargent & Lundy, Chicago, IL (C, CO, CN, CT, E, G, HX, HV, OM, PC, PU, RO, S, VA, VR, WI)
Schulz Electric, Timken Power Systems, New Haven, CT (CH, DG, E, MO, PA, RA, RO)
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (VT)
Sensor Networks, Inc., State College, PA (LP, RE)
SIET, Piacenza, Italy (VO, VT)
Simpson Gumpertz & Heger (SGH), Chicago, IL (BM, C, CO, CH, EJ, LC, PI, PR, PL, PT, PC, SF)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (CR, E, RI, SF)
Sulzer Management Ltd., (Sulzer Pumps (Canada) Inc.), Burnaby, British Columbia, Canada (MO, PU)
Switchgear Solutions, Inc., Tucson, AZ (BB, E, MO)
TEiC, Duncan, SC (BM, EJ, PR, PM, PU)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (VO, VT)
Thermal Engineering International (TEi), Cerritos, CA (CO, HX)
Thorburn Flex Inc., Pointe-Claire, Quebec, Canada (EJ)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (CO, G, PI, PA, PC, RF, RE, S, SF, SN, TC, TR, TS, WI)
US Ecology, Inc., Livonia, MI (TC)
Valcor Engineering Corp., (Valcor Nuclear Div.), Springfield, NJ (VA)
ValvTechnologies, Inc., Houston, TX (VO, VT)
Westinghouse Electric Co. LLC, Cranberry Township, PA (BM, CO, CN, CR, CH, E, F, FT, G, HX, LP, MS, MO, OM, PR, PC, PM, PU, RS, RI, RF, RE, RA, RO, ST, SF, SN, U)
Yokogawa Corporation of America, Newnan, GA (DG)

47600 Manipulators, Remote–*also see Remote Control, Handling & Positioning Devices*

ARES Security Corp., Vienna, VA
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH
Central Research Laboratories, Red Wing, MN
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY
Framatome Inc., (North American Headquarters), Lynchburg, VA
NuVision-HWM, Pittsburgh, PA
PAR Systems, LLC, Shoreview, MN
Plant Decommissioning, Lake Villa, IL
Radium Inc., Waynesboro, VA
Robatel Technologies, LLC, Roanoke, VA
Sensor Networks, Inc., State College, PA
Shadow Robot Company Ltd., London, United Kingdom
Tru-Motion Products, LLC, Cheyenne, WY
Wälischmiller Engineering GmbH, Markdorf, Baden-Württemberg, Germany

47620 Mapping Services

A Automated
C Conventional

CHP Consultants/Counts.Pro, Oak Ridge, TN (A)
Rockwell Automation, Inc., Milwaukee, WI (A)
Simpson Gumpertz & Heger (SGH), Chicago, IL (A, C)

47630 Markers, Identification

Coastal Network, Inc., Charlottesville, VA
Tech Products, Inc., Staten Island, NY

51730 Meteorological Equipment–*also see Environmental Monitoring Equipment*

A Anemometers
B Barometers
H Humidity Sensors
P Precipitation Sensors
SR Solar Radiation Sensors
T Temperature Sensors

ENVINET GmbH, Munich/Haar, Germany (P)
Watlow, St. Louis, MO (T)

53950 Mockup Design & Fabrication–*also see Training Materials*

CR Control Room
E Equipment
LR Local & Remote Control Panels

AVANTech, LLC, Knoxville, TN (LR)
AVANTech, LLC, Columbia, SC (LR)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CR, E)
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY (CR, E, LR)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CR, E)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (LR)
A. C. Macris, Consultants, Mystic, CT (CR, E)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (CR, LR)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (E)
NovaTech, Lynchburg, VA (LR)
NuSource LLC, Alexandria, VA (E)
NuVision-HWM, Pittsburgh, PA (CR, E, LR)
OTEK Corp., Tucson, AZ (CR)
PAR Systems, LLC, Shoreview, MN (E)
Plant Decommissioning, Lake Villa, IL (E)
✦Precision Custom Components, LLC, York, PA (E)
Premier Technology, Inc., Blackfoot, ID (E)
Promation Nuclear, Oakville, Ontario, Canada (CR, E, LR)
PROTEM USA, Evergreen, CO (E)
Radiological Solutions Inc., Rockdale, IL (E)
Siempelkamp NIS, Alzenau, Germany (E)
SIET, Piacenza, Italy (E)
Studsvik, Inc., Atlanta, GA (E)
VTT Technical Research Centre of Finland, VTT, Finland (CR, E)
Wagstaff Applied Technologies, Spokane, WA (CR, E, LR)

54750 Monitors, Other Than Radiation

AI Air In-Leak
CC Cable Condition
CV Check Valve
C Chlorine
CW Cooling Water System
CO Corrosion

FE Filter Efficiency
F Fuel Element (Ex-Reactor)
G Gas
HL Humidity, Integrated Leak Rate Test
IL In-Line Process
LP Loose Parts
MC Machinery Condition
N Noise
SW Service Water System
T Temperature
V Vibration
WC Water Chemistry
W Weld

Automation Products, Inc., (Dynatrol® Div.), Houston, TX (IL)
AVANTech, LLC, Knoxville, TN (SW, WC)
AVANTech, LLC, Columbia, SC (SW, WC)
CFM/VR-TESCO, LLC Continental Field Machining, Elgin, IL (W)
CM Technologies Corp., Coraopolis, PA (CC)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CO, WC)
Dominion Engineering, Inc., Reston, VA (F)
FCI-Fluid Components International LLC, San Marcos, CA (AI, G)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CV, C, CW, F, IL, LP, MC, N, T, V, WC)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (SW, T, V)
Intek, Inc., Westerville, OH (AI)
JSM Protective, Inc., Vero Beach, FL (T)
LND, Inc., Oceanside, NY (IL)
LUDECA, Inc., Doral, FL (MC, V)
Mirion Technologies, Inc., Atlanta, GA (F, LP, N, T)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (F, LP, N, T)
Munro Instruments, Harlow, Essex, United Kingdom (G)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (C)
NovaTech, Lynchburg, VA (LP, N)
NUCON International, Inc., Columbus, OH (FE)
NV5/Dade Moeller, Richland, WA (N, T)
OTEK Corp., Tucson, AZ (CW, T, V)
Radiological Solutions Inc., Rockdale, IL (CO, WC)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AI, CC, CV, C, CW, CO, FE, F, G, HL, IL, LP, MC, N, SW, T, V, WC, W)
Rosemount Nuclear Instruments, Inc., Chanhassen, MN
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (AI, T, V)
Sentry Equipment, Oconomowoc, WI (WC)
Sidus Solutions LLC, San Diego, CA (CW, SW)
Simpson Gumpertz & Heger (SGH), Chicago, IL (AI, CC, CO, V, W)
TEiC, Duncan, SC (AI)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (G)
Westinghouse Electric Co. LLC, Cranberry Township, PA (LP, T, V)
Yokogawa Corporation of America, Newnan, GA (WC)

55040 Monitors, Radiation, Area & Special-Purpose–*also see Environmental; Radiation Monitoring*

AA Air, Alpha, Continuous
AP Air, Particulate
AF Automated Floor Survey System
B Bag
CW Conveyorized Waste
DB Drum/Barrel
FA Fixed-Area
F Floor Contamination
FC Food Contamination
GE Gas Effluent
G Gate
LE Liquid Effluent
M Microwave & RF Radiation
MA Mobile (Aircraft)
MV Mobile (Vehicular)
OS Outstations
P Perimeter
PL Pipe/Lumber
PS Portable Survey Meters
R Radon
S Scrap, Radioactive
T Tool
TR Tritium
TP Tritium, Portable
U Underwater

Alpha Spectra, Inc., Grand Junction, CO (AP, FA, GE, P, S, TR, TP, U)
ARES Security Corp., Vienna, VA (MV)
AVANTech, LLC, Knoxville, TN (LE)
AVANTech, LLC, Columbia, SC (LE)
Bot Engineering Ltd, Campbellville, Ontario, Canada (AA, AP, B, CW, DB, FA, F, GE, G, LE, P, PS, T, TR, TP, U)
CAEN SyS, Viareggio, LU, Italy (AF, F, LE, PS)
Chase Environmental Group, Inc., Troy, IL (S)
Coastal Network, Inc., Charlottesville, VA (AP, PS)
ENVINET GmbH, Munich/Haar, Germany (AP, FA, MA, MV, OS, P, U)
Environmental Restoration Group, Inc., Albuquerque, NM (AF, F, R)
✦F&J SPECIALTY PRODUCTS, INC., Ocala, FL (AP, R)
Framatome Inc., (North American Headquarters), Lynchburg, VA (MV)
General Atomics Electromagnetic Systems, San Diego, CA (AA, AP, FA, GE, LE, MV, P, R, TR)
GLSEQ, LLC, Huntsville, AL (PS)
Health Physics Instruments, (Div. of Far West Technology, Inc.), Goleta, CA (PS)
HI-Q Environmental Products Co., Inc., San Diego, CA (AA, AP, TR, TP)
H3D, Inc., Ann Arbor, MI (FA, MA, MV, PS, S, U)
JSM Protective, Inc., Vero Beach, FL (PS)
LabLogic Systems, Inc., Tampa, FL (PS)
LND, Inc., Oceanside, NY (AP, DB, FA, F, FC, GE, G, LE, P, PL, PS, R, S, T, TR, TP, U)
Ludlum Measurements, Inc., Sweetwater, TX (TP)
Mirion Technologies, Inc., Atlanta, GA (AF, B, F, GE, G, LE, MA, MV, P, PL, PS, R, S, T, TR, U)
Mirion Technologies (Premium Analyse), Norroy Le Veneur, France (GE, TR, TP)
Mound Technical Solutions, Inc., Miamisburg, OH (TR, TP)
ORTEC, Oak Ridge, TN (AP, B, CW, DB, FA, F, FC, G, LE, MV, P, PL, PS, R, T, TR)
Overhoff Technology Corp., (A Div. of US Nuclear Corp.), Milford, OH (AA, B, DB, FA, GE, LE, R, T, TR, TP)
Premium Analyse, Norroy Le Veneur, France (TR, TP)
Pylon Electronics Inc., (Div. of Autrex) (Instrumentation Dept.), Ottawa, Ontario, Canada (AA, AP, F, PS, R)
RadComm Systems Corp., Oakville, Ontario, Canada (CW, FA, GE, G, MV, S)
Radiation Safety & Control Services, Inc., Seabrook, NH (AF, FA, P, PS)
Radiological Solutions Inc., Rockdale, IL (PL, PS)
ReNuke, Oak Ridge, TN (AA, AP, F, P, PS, R)
Rexon Components, Inc., Beachwood, OH (AA, AP, FA, F, GE, P, R, S, TR, TP, U)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AA, AP, AF, B, CW, DB, FA, F, FC, GE, G, LE, M, MA, MV, OS, P, PL, PS, R, S, T, TR, TP, U)
RSO, Inc./Radiation Service Organization, Laurel, MD (FA, PS, R)
S.E. International, Inc., Summertown, TN (PS)
Technical Associates, (US Nuclear Corp.), (Overhoff Technology Corp. Division), Canoga Park, CA (AA, AP, B, CW, DB, FA, F, FC, GE, G, LE, MA, MV, P, PS, R, S, T, TR, TP, U)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (M, S)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (AA, AP, B, CW, DB, FA, F, FC, GE, G, LE, MA, MV, P, PL, PS, R, S, T, TR, TP, U)
Warrington, Inc., Pflugerville, TX (AA, PS, S)

55060 Monitors, Radiation, Personnel–*also see Health Physics Equipment; Monitors, Microwave & RF*

AL Audible Alarm (Electronic)
D Doorway
FB Film Badges, Films
HF Hand-and-Foot
PI Pocket Ion Chambers
TL Thermoluminescent Dosimeters (TLD)
WB Whole-Body
WM Whole-Body, Mobile

Alpha Spectra, Inc., Grand Junction, CO (D, HF, WB)
Bot Engineering Ltd, Campbellville, Ontario, Canada (AL)
Coastal Network, Inc., Charlottesville, VA (PI)
ENVINET GmbH, Munich/Haar, Germany (AL)
Framatome Inc., (North American Headquarters), Lynchburg, VA (WB)
General Atomics Electromagnetic Systems, San Diego, CA (AL)
LND, Inc., Oceanside, NY (AL, D, HF, PI, WB)
Ludlum Measurements, Inc., Sweetwater, TX (D, HF)
Mirion Technologies Dosimetry Services, Irvine, CA (FB)
ORTEC, Oak Ridge, TN (D, HF, WB)
PSC Vodec, Nottingham, United Kingdom (AL)
RadComm Systems Corp., Oakville, Ontario, Canada (AL, D)
ReNuke, Oak Ridge, TN (PI, TL)
Rexon Components, Inc., Beachwood, OH (D, HF, TL)
S.E. International, Inc., Summertown, TN (PI)
Technical Associates, (US Nuclear Corp.), (Overhoff Technology Corp. Division), Canoga Park, CA (AL, D, HF, PI, WB)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (AL)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (AL, D, HF, PI, WB)

55490 Neutron Absorbers–*also see Filters, Neutron; Shielding Design; Shielding Materials*

BA Boric Acid
BC Boron Carbides
CE Boron Carbides, Enriched (B-10)
BN Boron, Natural
BE Boron, Enriched (B-10, B-11)
OB Other Boron Compounds
BP Burnable Poisons
C Cadmium
CS Cadmium Sulfide
E Encapsulated
GD Gadolinium
G Grain
IM In Matrixes
MM Metal Matrix Composites
MS Molded Shapes
P Pellets
PL Plates

Dufrane Nuclear Shielding Inc., Winsted, CT (BA, BC, BN, E, MS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (BP, GD)
Free Form Fibers, Saratoga Springs, NY (BC, MM)
Hopewell Designs, Inc., Alpharetta, GA (IM, MS)
ISOFLEX USA, San Francisco, CA (C, GD, G, P)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (E, P)
MillenniTEK, LLC, Knoxville, TN (CE, BN, IM, MM, MS, P, PL)

NovaTech, Lynchburg, VA (E, MM)
Nuclear Shielding Supplies & Service, Tucson, AZ (BC)
Robatel Technologies, LLC, Roanoke, VA (E, IM, MS, PL)
Roberts Engineering Services, Inc., Stuart, FL (C, PL)
Vitto Corp., Kanagawa, Japan (BA, BC, CE, BN, OB, BP, MM)
Westinghouse Electric Co. LLC, Cranberry Township, PA (BC, CE, BE, BP, C, GD)

56600 Nondestructive Testing

AC Acoustic Emission
EC Eddy Current
E Equipment Sales
DP Dye Penetrant
FP Fluorescent Penetrant
FL Flux Leakage
GP Ground Penetrating Radar
I Infrared
MP Magnetic Particle
R Radiographic
RT Radiographic, Real-Time Imaging
RS Residual Stress
S Services
U Ultrasonic
UW Underwater

Analysis and Measurement Services Corp. (AMS), (Including CHAR Services), Knoxville, TN (E, S)
BWX Technologies, Inc., Lynchburg, VA (EC, S, U)
COFREND, Paris, France (AC, EC, DP, FP, I, MP, R, RT, U)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (DP, FP, MP, R, S, U)
Curtiss-Wright Nuclear Division, Anatec, Brea, CA (EC, DP, FP, MP, S, U)
Curtiss-Wright Nuclear Division, LMT, Hutchinson, MN (EC, DP, MP, U)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (I)
Day & Zimmermann, Philadelphia, PA (S)
Dubose National Energy Services, Inc., Clinton, NC (DP, FP, MP, R, U)
Elcometer Inc., Warren, MI (EC, U)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (DP, MP, U)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (DP, FP, MP, S, U)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AC, EC, E, DP, FP, FL, MP, R, RT, RS, S, U, UW)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (EC, DP, FP, FL, I, MP, R, RT, RS, S, U)
GEL Solutions, LLC, (A Member of The GEL Group, Inc.), Charleston, SC (GP, S)
Hennigan Engineering LLC, Hingham, MA (U)
HydroPro Inc., Bourbon, MO (E)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (R, RT)
JNT Technical Services Inc., Little Ferry, NJ (I)
✦Joseph Oat Corp., Camden, NJ (EC, DP)
Lambda Technologies, Cincinnati, OH (DP, FP, RS)
✦Major Tool & Machine, Inc., Indianapolis, IN (DP, FP, MP, R, U)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (DP)
NovaTech, Lynchburg, VA (DP, U, UW)
NUCON International, Inc., Columbus, OH (S)
✦Orano Federal Services, Charlotte, NC (FP, MP, R, RT, S, U)
PAR Systems, LLC, Shoreview, MN (EC, I, R, U, UW)
✦Precision Custom Components, LLC, York, PA (AC, EC, DP, FP, MP, R, S, U)
Rogante Engineering Office, Civitanova Marche, Italy (R, RS)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AC, EC, E, DP, FP, FL, GP, I, MP, R, RT, RS, S, U, UW)
Sargent & Lundy, Chicago, IL (S)
Schulz Electric, Timken Power Systems, New Haven, CT (DP, FP, I, MP, S, U)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (EC, DP, FP, MP, R, U)
Sonic Systems International, Inc., Houston, TX (EC, DP, FP, FL, MP, R, U, UW)
Southwest Research Institute, San Antonio, TX (AC, EC, DP, GP, MP, R, S, U)
Structural Integrity Assoc., Inc., San Jose, CA (S)
System One, Pittsburgh, PA (EC, DP, FP, GP, I, MP, R, RT, RS, S, U)
Technisonic Research Inc., Fairfield, CT (U)
Technology for Energy Corp., Knoxville, TN (RS)
TEiC, Duncan, SC (S)
Thermal Engineering International (TEi), Cerritos, CA (EC)
✦Underwater Construction Corp., Essex, CT (U)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (AC, E, S, U, UW)
Westinghouse Electric Co. LLC, Cranberry Township, PA (EC, E, DP, FP, I, MP, S, U, UW)
Wolfgang Waelischmiller Solutions, München, Germany (RT)
Zetec, Inc., Snoqualmie, WA (EC, E, FL, S, U)

58000 Particle-Measuring Instruments

Framatome Inc., (North American Headquarters), Lynchburg, VA
HI-Q Environmental Products Co., Inc., San Diego, CA
Mirion Technologies, Inc., Atlanta, GA
ORTEC, Oak Ridge, TN
RADeCO, Inc., Plainfield, CT
VTT Technical Research Centre of Finland, VTT, Finland

59800 Pipe–*also see Cleaning Equip.*

CS Carbon Steel, Seamless
CM Chrome Moly
CG Commercial Grade Dedication
CO Copper
L Lead
NC Nickel-Cobalt, Seamless
PL Plastic-Lined
SL Seamless
S Stainless
SS Stainless, Seamless
T Titanium
TS Titanium, Seamless
Z Zirconium
ZS Zirconium, Seamless

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (CS, S)
AVANTech, LLC, Knoxville, TN (S)
AVANTech, LLC, Columbia, SC (S)
Burns & McDonnell, Kansas City, MO (CS, CM, S)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (CS, CM, CO, L, NC, PL, SL, S, SS, T, TS, Z, ZS)
Dubose National Energy Services, Inc., Clinton, NC (CS, CM, NC, SL, S, SS)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (CS, SL, S, SS)
Energy Steel, Lapeer, MI (CS, CM, CO, L, NC, PL, T, TS)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (CS, CM, CO, L, NC, PL, SL, S, SS, T, TS, Z, ZS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (SL, S, SS, Z, ZS)
FuseRing.com, London, Ontario, Canada (CM, S, T, Z)
✦Joseph Oat Corp., Camden, NJ (SL, S, SS)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (L)
PMT Nuclear, Woodridge, IL (CS, CO, L, NC, PL, SL, S, SS, T, TS)
Seafab Metals Co., (Div. of The Doe Run Co.), Casa Grande, AZ (L)
Swagelok Company, Solon, OH (SS)
Tioga Pipe Supply Co., Inc., Philadelphia, PA (CS, CM, CO, NC, SL, S, SS, T, TS, Z, ZS)
Vitto Corp., Kanagawa, Japan (L, NC)
Westinghouse Electric Co. LLC, Cranberry Township, PA (Z, ZS)

59850 Pipe & Tube Machinery & Equipment–*also see Cleaning Equip. (Tube Cleaning)*

B Bending, Pipe
BT Bending, Tube
BP Beveling, Pipe
BV Beveling, Tube
CR Crimpers, Tube
CP Cutting, Pipe
CT Cutting, Tube
CI Cutting, In-Place
EH Expanders, Tube, Hydraulic
EM Expanders, Tube, Mechanical
EJ Expansion Joints
F Fittings
IT Instrumentation Tubing, Orbital Welding
PO Primary, Orbital TIG Welding
RS Rounding & Sizing
T Threading, Pipe
W Weld End Preparation

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (B, BT, BP, BV, CR, CP, CT, CI, EH, EM, IT, PO, T, W)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (CP, CT, CI)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (CP, CT, CI)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (CP, CT, CI)
✦Brokk Inc., Santa Fe, NM (CP, CT, CI)
Burns & McDonnell, Kansas City, MO (RS)
CFM/VR-TESCO, LLC Continental Field Machining, Elgin, IL (CI, PO)
Dubose National Energy Services, Inc., Clinton, NC (B)
E. H. Wachs, Lincolnshire, IL (BP, BV, CP, CT, CI, PO, W)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CT, CI, EH, EM, PO, W)
FuseRing.com, London, Ontario, Canada (IT)
HydroPro Inc., Bourbon, MO (EH, EM, W)
Magnatech LLC, East Granby, CT (IT, PO)
PMT Nuclear, Woodridge, IL (B, BT, BP, BV, CP, CT, PO, T)
Swagelok Company, Solon, OH (IT, PO)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (B, CP)
Tioga Pipe Supply Co., Inc., Philadelphia, PA (B, BT, BP, BV, CP, T, W)

60100 Pipe Hangers and Supports

Anvil International, LLC, North Kingstown, RI
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
Dubose National Energy Services, Inc., Clinton, NC
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA
E.S. Fox Limited, Niagara Falls, Ontario, Canada
Fronek - Anchor Darling Enterprises, Inc., (Sub. of Piping Technology & Products, Inc.), Laconia, NH
NuSource LLC, Alexandria, VA
PMT Nuclear, Woodridge, IL
Promation Nuclear, Oakville, Ontario, Canada

61570 Plugs–*also see Decontamination Chemicals, Equip. & Services*

CT Condenser Tube
CR Control Rod Drive Housing
FH Feedwater Heater
F Freeze Plugs
HL Hot & Cold Leg (Remotely Installed)
I Isolation
MS Main Steam Line
MR Moisture Separator Reheater

P Pipeline
RP Reactor Pressure Vessel Drain Line
RV Reactor Vessel Nozzle
RO Recirculation Outlet Nozzle
SL Steamline (Remotely Installed)
SH Stud Hole
ST System Test

Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (CT, CR, FH, I, RO, SH)
Curtiss-Wright EST Group, Hatfield, PA (CT, FH)
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH (CR, I, RP, RO, SH)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CT, CR, FH, HL, I, MS, P, RP, RV, RO, SL, SH)
Dubose National Energy Services, Inc., Clinton, NC (RV)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (CT, F, P, RV)
Energy Steel, Lapeer, MI (CR, I, MR)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CT, CR, FH, RV, SH)
Heat Exchanger Products Corp. (HEPCO), Hingham, MA (CT)
Hennigan Engineering LLC, Hingham, MA (CT)
HydroPro Inc., Bourbon, MO (CT, FH)
JNT Technical Services Inc., Little Ferry, NJ (CT, FH, MR, SH)
Master-Lee Engineered Products Inc., Latrobe, PA (SH)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (HL, I, MS, P, RP, RV, RO, SL, SH, ST)
Simpson Gumpertz & Heger (SGH), Chicago, IL (P)
TEiC, Duncan, SC (MS)
Thermal Engineering International (TEi), Cerritos, CA (CT, FH, MR)

63400 Power Supplies

AC AC
C Chargers, Battery
DC DC
HF High-Frequency
HV High-Voltage
I Instrument
IN Inverters
PL Power Line Conditioner
S Stand-by
U Uninterruptible (AC-DC-AC)

AVANTech, LLC, Knoxville, TN (AC, DC, I, U)
AVANTech, LLC, Columbia, SC (AC, DC, I, U)
Black & Veatch, Overland Park, KS (S)
CAEN SyS, Viareggio, LU, Italy (HV)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (AC, DC, HV, I, PL, S, U)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (AC, DC, I)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (U)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (AC, DC, U)
ORTEC, Oak Ridge, TN (I)
Paragon Energy Solutions, Fort Worth, TX (AC, DC, I, PL, S, U)
Rockwell Automation, Inc., Milwaukee, WI (AC, DC, I, U)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (S)
Rolls-Royce Civil Nuclear SAS, Meylan, France (AC, DC, HV, U)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (AC, DC, HV, U)
Schneider Electric Gutor Technologies, Houston, TX (C, I, IN, PL, U)
Unique Technical Resources, Wayne, PA (AC, DC, S, U)
Westinghouse Electric Co. LLC, Cranberry Township, PA (AC, DC, HF, HV, I, PL, S, U)

64300 Protective Coverings & Tarpaulins

Protective Plastics, Inc., Greenville, SC
✦Reef Industries, Inc., Houston, TX
Rich Industries Inc., New Philadelphia, OH
✦Strategic Packaging Systems, Madisonville, TN

64700 Pumps, Centrifugal

CW Condensate & Circulating Water
E3 Engineered Class III
HD Heater Drain
NR Non-Code Radwaste
N2 Nuclear Class II
PC Primary Coolant
RF Reactor Feed
SW Service Water, Non-Code
SN Service Water, Nuclear Class III
SC Small Class III Including Radwaste

Electro Static Technology, Mechanic Falls, ME (PC)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CW, PC, RF)
Hayward Tyler, Colchester, VT (CW, E3, HD, NR, N2, PC, RF, SW, SN, SC)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (NR)
KSB, Inc., Henrico, VA (CW, E3, HD, N2, PC, RF, SW, SN, SC)
Paragon Energy Solutions, Fort Worth, TX (CW, E3, HD, NR, N2, PC, RF, SW, SN, SC)
Rotating Equipment Repair, Sussex, WI (CW, E3, HD, NR, N2, PC, RF, SW, SN, SC)
Sulzer, Chattanooga, TN (CW, E3, HD, NR, N2, PC, RF, SW, SN, SC)
Sulzer Management Ltd., (Sulzer Pumps (Canada) Inc.), Burnaby, British Columbia, Canada (CW, E3, HD, N2, PC, RF, SW, SN)
Teikoku USA, Inc., (Chempump Div.), Warminster, PA (CW, E3, HD, NR, N2, PC, RF, SW, SN, SC)
Westinghouse Electric Co. LLC, Cranberry Township, PA (E3, PC, RF, SN, SC)

64750 Pumps, Other

A Air-Operated
CL Cleanup
CA Containment Air/Gas Sampling
DH Diaphragm, Hydraulically Actuated
FP Fire Protection
HO Hand-Operated
HP High-Pressure
HY Hydraulic
J Jet
MP Metering & Proportioning
PD Positive-Displacement
SR Sealless Reciprocating
SL Slurry
SO Sodium
SP Special-Purpose
V Vacuum

AVANTech, LLC, Knoxville, TN (A, CL, MP, PD, SL, V)
AVANTech, LLC, Columbia, SC (A, CL, MP, PD, SL, V)
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH (A, HY)
Hayward Tyler, Colchester, VT (HP, SL, SP)
KSB, Inc., Henrico, VA (HP, J, SL, SO, SP)
Munro Instruments, Harlow, Essex, United Kingdom (CA, V)
ORTEC, Oak Ridge, TN (V)
Power System Sentinel Technologies, LLC, Warrior, AL (HP)
RADeCO, Inc., Plainfield, CT (CA, SP, V)
Radiological Solutions Inc., Rockdale, IL (HP, MP, PD)
Rotating Equipment Repair, Sussex, WI (HP, SL, V)
Schutte and Koerting, Trevose, PA (J, V)
Sulzer Management Ltd., (Sulzer Pumps (Canada) Inc.), Burnaby, British Columbia, Canada (HP, SO, SP)
Teikoku USA, Inc., (Chempump Div.), Warminster, PA (MP, PD, SR)

66280 Racks, Fuel Storage–*also see Storage Systems, Spent-Fuel*

C Conventional
HD High-Density

Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (C)
Dubose National Energy Services, Inc., Clinton, NC (C)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, HD)
✦Holtec International, Camden, NJ (C, HD)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (HD)
✦Major Tool & Machine, Inc., Indianapolis, IN (C, HD)
Nuclear Shielding Supplies & Service, Tucson, AZ (HD)
NuSource LLC, Alexandria, VA (C)
PAR Systems, LLC, Shoreview, MN (C, HD)
✦Precision Custom Components, LLC, York, PA (C, HD)
Simpson Gumpertz & Heger (SGH), Chicago, IL (C, HD)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (C)
✦Underwater Construction Corp., Essex, CT (HD)
Vigor (formerly Oregon Iron Works), Clackamas, OR (C, HD)
Wagstaff Applied Technologies, Spokane, WA (C)
Westinghouse Electric Co. LLC, Cranberry Township, PA (C, HD)

67380 Radiation Monitoring Serv.–*also see Envir. Monitoring; Health Phys. Serv.*

A Analog Systems
DR Design, Retrofit
D Digital Systems
M Maintenance
MO Mobile (Vehicular)
SE Sample Encapsulation
SS Smear Sampling, Area/Environmental
TC Testing & Calibration

Applied Science Professionals, LLC, (ASP-LLC), Salt Lake City, UT (TC)
ARES Security Corp., Vienna, VA (MO)
BHI Energy, Weymouth, MA (A, DR, D, M, MO, SS, TC)
Cabrera Services Inc., East Hartford, CT (SS, TC)
Campoverde srl, Milano, Italy (SS, TC)
Chase Environmental Group, Inc., Troy, IL (SS)
CHP Consultants/Counts.Pro, Oak Ridge, TN (D, MO, TC)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (DR)
General Atomics Electromagnetic Systems, San Diego, CA (A, DR, D, M, TC)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (DR, D)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (TC)
Matom Ltd., North Wales, United Kingdom (SE, SS)
Mirion Technologies (Canberra) Inc., Meriden, CT (A, DR, D, MO, SS, TC)
Nuclear Technology Services, Inc., Roswell, GA (TC)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (TC)
Radiation Safety & Control Services, Inc., Seabrook, NH (TC)
Radiological Solutions Inc., Rockdale, IL (TC)
ReNuke, Oak Ridge, TN (SS, TC)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (DR, D, M)
RSO, Inc./Radiation Service Organization, Laurel, MD (SS)
Sargent & Lundy, Chicago, IL (DR)
Springs Advanced Technology Group (ATG), LLC, Westminster, CO (TC)

Tap Report, Toronto, Ontario, Canada (M, TC)
Technical Associates, (US Nuclear Corp.), (Overhoff Technology Corp. Division), Canoga Park, CA (A, D, MO, TC)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (TC)
VTT Technical Research Centre of Finland, VTT, Finland (TC)
Wood, (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group), Grand Junction, CO (MO)

68000 Radioactive Waste Handling & Treatment Equip.–*also see Solid Waste Reduction*

CA Calciners
CO Compactors
CN Concentrators (Cross-Flow Filter)
CS Crushers, Scintillation Vials
DC Drum Capping Machines, Remote
DR Drum Cutting Machines
DW Drum Washing Systems, Automatic
E Evaporators
F Furnaces for Glass Melting
GC Gas Compressors
I Incinerators
L Liners
LV Liquid Volume Reduction
P Packaging
R Robotic
SC Secondary Containment Products
SH Shredders (Volume Reduction)
S Solidification
SS Sorters, Sorting Tables
ST Storage Systems, On-Site, High-Level
SF Storage Systems, On-Site, Low-Level
WT Waste Tracking & Accountability Systems (Computerized)

Accelerated Decommissioning Partners - ADP, Dallas, TX (ST, SF)
AeroGo, Inc., Seattle, WA (CA, CO, CN, CS, DC, DR, DW, E, F, I, SC, SH, ST, SF)
Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (CO, DR, P, WT)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (DR, R)
American Crane & Equipment Corp., Douglassville, PA (R, ST, SF, WT)
Artisan Industries Inc., Stoughton, MA (S)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (CO, P, R, SH, SS, WT)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (CO, P, R, SH, SS, WT)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (CO, P, R, SH, SS, WT)
AVANTech, LLC, Knoxville, TN (CN, E, L, LV, P, S, SF)
AVANTech, LLC, Columbia, SC (CN, E, L, LV, P, S, SF)
Boston Government Services, LLC (BGS), Oak Ridge, TN (WT)
Brokk AB, Skelleftea, Sweden (R)
✦Brokk Inc., Santa Fe, NM (R)
CAEN SyS, Viareggio, LU, Italy (WT)
Central Research Laboratories, Red Wing, MN (P)
Container Products Corp., Wilmington, NC (CO, SS, SF)
Deep Isolation, Berkeley, CA (ST)
Deltech Kiln and Furnace Design, LLC, Denver, CO (F)
Dominion Engineering, Inc., Reston, VA (R)
Dufrane Nuclear Shielding Inc., Winsted, CT (L, P, ST, SF)
DW James Consulting, North Oaks, MN (WT)
✦EnergySolutions LLC, Salt Lake City, UT (I, S)
Environmental Alternatives, Inc., Swanzey, NH (E, LV, R, S)
Foss Therapy Services, Inc., North Hollywood, CA (ST, SF)
Frham Safety Products, Inc., Nashville, TN (L)
GNS Gesellschaft fur Nuklear-Service mbH, Essen, Germany (CO, CN, P, WT)
✦Holtec International, Camden, NJ (ST, SF)
Hopewell Designs, Inc., Alpharetta, GA (P)
✦I.C.E. Service Group, Inc., Moon Township, PA (P)
✦Joseph Oat Corp., Camden, NJ (E, L)
See advertisement on page 9
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (R, ST, SF, WT)
Lancs Industries, Albuquerque, NM (L)
✦Major Tool & Machine, Inc., Indianapolis, IN (CA)
Matom Ltd., North Wales, United Kingdom (S)
METOIL, Praha, Czech Republic (LV)
✦NAC International Inc., Peachtree Corners, GA (ST)
NAC LPT LLC, Sewickley, PA (P)
NovaTech, Lynchburg, VA (DC, DR, DW, P, R)
NuVision-HWM, Pittsburgh, PA (DC, DR, R)
Orano Decommissioning Services, Hudson, MA (ST, SF)
✦Orano Federal Services, Charlotte, NC (CA, E, L, LV, P, R, ST, SF)
Orano TN, Columbia, MD (ST, SF)
✦PacTec, Inc., Clinton, LA (L, P, SC, SF)
PAR Systems, LLC, Shoreview, MN (DC, DR, DW, P, R)

✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (SH, S, SS, ST, SF, WT)
✦Petersen Inc., Ogden, UT (CA, CS, F, SC, SH)
Premier Technology, Inc., Blackfoot, ID (P)
PTP Spent Fuel Services, LLC, Grand Island, NY (ST, SF)
Radiological Solutions Inc., Rockdale, IL (S)
✦Reef Industries, Inc., Houston, TX (P, SF)
Robatel Technologies, LLC, Roanoke, VA (CA, P, R, S, SS, SF)
S&G Enterprises, Inc., Germantown, WI (CO, CS, SH)
Siempelkamp NIS, Alzenau, Germany (P)
Skolnik Industries, Chicago, IL (P, SC)
✦Strategic Packaging Systems, Madisonville, TN (P)
Studsvik, Inc., Atlanta, GA (LV)
Teledyne FLIR, Chelmsford, MA (R)
Unified Engineering, Hamilton, Ontario, Canada (CS, DR, SF)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (SC, SS)
Vigor (formerly Oregon Iron Works), Clackamas, OR (CA, E, I, L, P, SC, SH, ST, SF)
VTT Technical Research Centre of Finland, VTT, Finland (I, R, S)
Wagstaff Applied Technologies, Spokane, WA (CO, DC, DR, DW, E, L, LV, P, R, SC, SH, SS, ST, SF)
Waste Control Systems, Inc., Phoenix, MD (CO, CS, SC, SH, SS)
Westinghouse Electric Co. LLC, Cranberry Township, PA (CO, CN, CS, DC, DR, DW, E, P, R, SC, SH, S, SS, ST, SF, WT)
Wheelift Transporters, Waverly, IA (R, ST)
Wälischmiller Engineering GmbH, Markdorf, Baden-Württemberg, Germany (R)
✦WMG, Inc., Peekskill, NY (L, P, WT)
Wolfgang Waelischmiller Solutions, München, Germany (ST)
Wood, (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group), Grand Junction, CO (SS)
Worthington Industries, Columbus, OH (ST, SF)

68950 Radioisotopes

CS Calibration Standards
F Foils
G Gases, Calibration
LC Labeled Compounds
PP Primary & Processed
RS Radiation Standards
RC Radiochemicals
RM Radioisotopes, Medical
RP Radiopharmaceuticals
RE Recycling
SS Sealed Sources

Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (RE, SS)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (RM, RP)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (RM, RP)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (RM, RP)
AZIsotopes, Bunker Hill, IN (RM, RP)
Campoverde srl, Milano, Italy (CS, F, G, LC, RS, RC, RM)
Curie Environmental Services, Albuquerque, NM (RE)
Eckert & Ziegler Analytics, Atlanta, GA (CS, F, G, PP, RS, RC, SS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CS, RS, RP, SS)
Frontier Technology Corp., Xenia, OH (RM, SS)
General Atomics Electromagnetic Systems, San Diego, CA (CS, SS)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (RS)
Nuclear Technology Services, Inc., Roswell, GA (CS, F, RS)
Nuclear-21, Waasmunster, Belgium (RM, RP)
Promation Nuclear, Oakville, Ontario, Canada (RM, RP)
Pylon Electronics Inc., (Div. of Autrex) (Instrumentation Dept.), Ottawa, Ontario, Canada (SS)
Radiation Safety & Control Services, Inc., Seabrook, NH (RS)
RadQual, LLC, Idaho Falls, ID (CS, G, RS, RC, RM, SS)
VTT Technical Research Centre of Finland, VTT, Finland (CS, G, LC, PP, RC)

71190 Records Management Systems

CM Configuration Management
DS Document Storage & Retrieval
DC Drawing Control
HP Health Physics
O Operations Recording
S Spare Parts
T Training

Black & Veatch, Overland Park, KS (CM, DS, DC)
Boston Government Services, LLC (BGS), Oak Ridge, TN (CM, DS, DC)
CHP Consultants/Counts.Pro, Oak Ridge, TN (DS, HP)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CM, DS, DC, O, S, T)
The Delphi Groupe, Inc., Austin, TX (CM, HP, T)
Engineering Planning and Management, Inc., Framingham, MA (S)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CM, S)
GSE Hyperspring, Columbia, MD (CM)
HukariAscendent, Wheat Ridge, CO (CM, HP)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (HP)
Mirion Technologies, Inc., Atlanta, GA (HP)
North Wind Group, Idaho Falls, ID (CM, HP)
NV5/Dade Moeller, Richland, WA (DS, HP, T)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (CM, DS, DC, HP, O, S, T)
Rolls-Royce Civil Nuclear SAS, Meylan, France (T)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (T)
Sargent & Lundy, Chicago, IL (CM, DC, O, S, T)
Tap Report, Toronto, Ontario, Canada (O)
✦WMG, Inc., Peekskill, NY (T)

71500 Refrigeration–*also see Cooling Systems, Body*

ECU Corporation, Cincinnati, OH
Ellis & Watts Global Industries, Inc., Batavia, OH
PMT Nuclear, Woodridge, IL

72300 Remote Control, Handling & Positioning Devices & Sys.–*also see Robotic Devices*

AI Artificial Intelligence/Expert Systems
EE End Effectors, Grippers, & Wrists
RC Remote Control
RH Remote Handling
RP Remote Positioning
RO Robotics
TM Telescoping Masts

Advanced Consulting Group, Inc., Chicago, IL (EE, RC, RO)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (EE, RC, RH, RP, RO)
American Crane & Equipment Corp., Douglassville, PA (EE, RC, RH, RP, RO)
ARES Security Corp., Vienna, VA (AI, EE, RC, RH, RP, RO, TM)

ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (EE, RC, RH, RP, RO)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (EE, RC, RH, RP, RO)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (EE, RC, RH, RP, RO)
Brokk AB, Skelleftea, Sweden (EE, RC, RH, RP, RO)
✦Brokk Inc., Santa Fe, NM (RC, RH, RP, RO)
Central Research Laboratories, Red Wing, MN (RC, RH, RP)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (RC, RH, RP)
E. H. Wachs, Lincolnshire, IL (RC)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AI, RC, RH, RP, RO)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (AI, RC)
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (RH, RP, RO)
KUKA Systems UK Ltd, West Midlands, United Kingdom (RH, RO)
Master-Lee Engineered Products Inc., Latrobe, PA (EE)
Mirion Technologies, Inc., Atlanta, GA (RC, RP)
NovaTech, Lynchburg, VA (EE, RC, RH, RP, RO)
Nuclear Systems Associates, Inc., Brea, CA (EE, RC, RH, RP, RO)
NuVision-HWM, Pittsburgh, PA (AI, EE, RC, RH, RP, RO)
PAR Systems, LLC, Shoreview, MN (AI, EE, RC, RH, RP, RO, TM)
Promation Nuclear, Oakville, Ontario, Canada (EE, RC, RH, RP, RO)
Radium Inc., Waynesboro, VA (AI, EE, RC, RH, RP, RO)
Remote Ocean Systems (ROS), San Diego, CA (RC, RP)
Robatel Technologies, LLC, Roanoke, VA (RC, RH, RP)
Rockwell Automation, Inc., Milwaukee, WI (RC, RP, RO)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AI, EE, RC, RH, RP, RO)
Sensor Networks, Inc., State College, PA (EE)
Shadow Robot Company Ltd., London, United Kingdom (EE, RC, RH, RO)
Sidus Solutions LLC, San Diego, CA (RP)
Siempelkamp NIS, Alzenau, Germany (RC, RH, RP)
Southwest Research Institute, San Antonio, TX (EE, RC, RH, RP, RO)
Teledyne FLIR, Chelmsford, MA (RO)
Tri Nuclear Corp., Ballston Lake, NY (RH)
✦Underwater Construction Corp., Essex, CT (RC, RH, RP, RO)
Unified Engineering, Hamilton, Ontario, Canada (EE, RP, RO)
Westinghouse Electric Co. LLC, Cranberry Township, PA (EE)
Wälischmiller Engineering GmbH, Markdorf, Baden-Württemberg, Germany (EE, RC, RH, RO)
Wolfgang Waelischmiller Solutions, München, Germany (RC, RH, RP, RO)

73300 Remote-Viewing Instruments & Systems

BI Binoculars
BF Borescopes, Flexible
BR Borescopes, Rigid
I Infrared
M Monocular Scopes, Viewing/ALARA
P Periscopes
RR Radiation-Resistant
S Submersible
T Telescopes

Coastal Network, Inc., Charlottesville, VA (M)
Framatome Inc., (North American Headquarters), Lynchburg, VA (S)
Hopewell Designs, Inc., Alpharetta, GA (BF, BR)
ISEC Monitoring Systems, Helsingborg, Sweden (RR)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (S)
Lights Camera Action, LLC, Gilbert, AZ (RR, S)
Mirion Technologies, Inc., Atlanta, GA (RR, S, T)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (RR, S)
NuVision-HWM, Pittsburgh, PA (RR, S)
RADeCO, Inc., Plainfield, CT
Radium Inc., Waynesboro, VA (RR, S)
Remote Ocean Systems (ROS), San Diego, CA (S)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (BI, BF, BR, I, M, P, RR, S, T)
Sensor Networks, Inc., State College, PA (S)
Sidus Solutions LLC, San Diego, CA (I, S)
✦Thermo Scientific - CIDTEC Cameras & Imagers, (Part of Thermo Fisher Scientific), Liverpool, NY (RR)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (S)

73550 Respiratory Protection Equip.–*also see Clothing, Prot.; Health Phys. Serv.*

AP Air Purification Systems
C Compressors
FT Fit-Testing Systems
RC Respirator Cleaning Systems
RD Respirator Drying Systems
RL Respirators, Air-Line
R Respirators, Air-Purifying
RX Respirators, Combination Type
RP Respirators, Powered Air-Purifying
RE Resuscitators
SC Self-Contained Breathing Apparatus
SB SCBA Boost Pumps
SE SCBA (Escape)
SF SCBA Filling Stations
ST SCBA Flow Testing & Services
SW SCBA Software
SS Storage Systems (Cleaned Equipment)
V Vessels, High-Pressure, Air

Framatome Inc., (North American Headquarters), Lynchburg, VA (AP, C)
Frham Safety Products, Inc., Nashville, TN (AP, C, RL, R, RX, RP, SC)
JSM Protective, Inc., Vero Beach, FL (R, RX, RP)
Lancs Industries, Albuquerque, NM (RL)
NUCON International, Inc., Columbus, OH (AP, FT)
Radium Inc., Waynesboro, VA (AP, R, RX, RP)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (C, RC, RD, RL, R, RX, SS)

73570 Rigging Specialists

Barnhart Nuclear Services, Fairhope, AL
Bigge Power Constructors, (Affl. of Bigge Crane and Rigging Co.), San Leandro, CA
Dufrane Nuclear Shielding Inc., Winsted, CT
Engineered Rigging, Valparaiso, IN
E.S. Fox Limited, Niagara Falls, Ontario, Canada
Wheelift Transporters, Waverly, IA

73620 Robotic Devices, Systems–*also see Remote Control*

CA CAD-Driven
C Condenser, In-Service Inspection
FT Force/Torque Sensors
N Nuclear
RV Reactor Vessel Head, ISI
S Submersible

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (N)
ARES Security Corp., Vienna, VA (CA, N)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (CA, C, FT, RV, S)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (CA, C, FT, RV, S)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (CA, C, FT, RV, S)
AVANTech, LLC, Knoxville, TN (S)
AVANTech, LLC, Columbia, SC (S)
Brokk AB, Skelleftea, Sweden (RV)
✦Brokk Inc., Santa Fe, NM (CA)
Curtiss-Wright Nuclear Division, Anatec, Brea, CA (RV)
Framatome Inc., (North American Headquarters), Lynchburg, VA (RV, S)
Kinectrics Inc., Toronto, Ontario, Canada (CA, N)
KUKA Systems UK Ltd, West Midlands, United Kingdom (N)
NuVision-HWM, Pittsburgh, PA (RV, S)
PAR Systems, LLC, Shoreview, MN (CA, N, S)
Radium Inc., Waynesboro, VA (FT, S)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (CA, C, FT, RV, S)
Southwest Research Institute, San Antonio, TX (N, RV, S)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (FT)
Thermal Engineering International (TEi), Cerritos, CA (C)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (N, RV, S)
Wälischmiller Engineering GmbH, Markdorf, Baden-Württemberg, Germany (CA, C, FT, N, S)

74150 Samplers & Sampling Systems

A Air (Carried by Personnel)
AP Air Particulate
AS Automatic Systems
EC Evaporator Concentrate
G Gas
I Iodine
L Liquid
M Metallurgical
RT Real-Time Remote
SS Stack Sampling
W Waste

AVANTech, LLC, Knoxville, TN (L, W)
AVANTech, LLC, Columbia, SC (L, W)
✦F&J SPECIALTY PRODUCTS, INC., Ocala, FL (A, AP, I)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AS, G, L)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (SS)
General Atomics Electromagnetic Systems, San Diego, CA (AP, G, I, L, SS)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (M)
LND, Inc., Oceanside, NY (AS)
Mirion Technologies, Inc., Atlanta, GA (AP, I, SS)
Mound Technical Solutions, Inc., Miamisburg, OH (SS)
RADeCO, Inc., Plainfield, CT (A, AP, I)
Radiological Solutions Inc., Rockdale, IL (L)
ReNuke, Oak Ridge, TN (A, AP)
Sentry Equipment, Oconomowoc, WI (AS, L, W)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (SS)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (A, AP)
US Nuclear Corp., (Technical Associates Sub.), (Overhoff Technology Corp. Sub.), Canoga Park, CA (AP, AS, G, I, L)

74320 Sampling Systems Services–*also see Radiation Monitoring Services*

Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY
Framatome Inc., (North American Headquarters), Lynchburg, VA
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC
GLSEQ, LLC, Huntsville, AL

ISO-PACIFIC Remediation Technologies, Inc., Richland, WA
Sentry Equipment, Oconomowoc, WI

74350 Scaffolding–*also see Shoring; Training*

C Conventional
M Modular
SP Scaffold Plank
S Suspended Type
T Tube & Clamp Type

Advanced Nuclear LLC, East Petersburg, PA (C, M, SP, S, T)
BHI Energy, Weymouth, MA (C, M, SP)
Unified Engineering, Hamilton, Ontario, Canada (M)

75190 Seals–*also see Decontamination Chemicals & Equipment; Plugs*

CM Ceramic-Metal Assemblies
CS Conduit Seal
ES Equipment Storage Pool
FG Flat Gasketing
GR Flat Gasketing, Radiation-Resistant
FT Flux Thimble Seal
H Hydraulic
I Inflatable
IP Inspection Port
MS Mechanical, Shaft
MP Mechanical, Shaft, Reactor Circulating Pump
M Metal (O-Rings, C-Rings, etc.)
NI Nuclear Instrumentation Cover
P Penetration
RC Reactor Cavity Pool
SR Sealing Systems, Compressed Rubber
SS Sealing Systems, Fluid

Adam Brown Consulting, Inc., Cary, IL (P)
Cross Manufacturing Company (1938) Ltd., Bath, United Kingdom (MS, M, SS)
Curtiss-Wright Nuclear Division, AP Services, Middleburg Heights, OH (CM, FG, GR, H, MS, MP, SR, SS)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (M, SS)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (FG, GR, H, I, MS, M, P)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (ES, H, I, IP, NI, P, RC, SR, SS)
Electro Static Technology, Mechanic Falls, ME (MS, MP)
Energy Steel, Lapeer, MI (FG, MS, MP, M)
Framatome Inc., (North American Headquarters), Lynchburg, VA (I, MS, MP, M, P, RC, SS)
KSB, Inc., Henrico, VA (MP)
Mirion Technologies, Inc., Atlanta, GA (CM, P)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (CM, P)
NovaTech, Lynchburg, VA (CM, ES, I)
Paragon Energy Solutions, Fort Worth, TX (MS)
Pave Technology Co., Dayton, OH (P)
Pawling Engineered Products, Inc., Pawling, NY (ES, FG, GR, I, IP, NI, P, RC, SR)
PMT Nuclear, Woodridge, IL (FG, GR, MS)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (ES, GR, I, IP, NI, P, RC)
Presray Corp., (Div. of Pawling Corp.) (Critical Containment Solutions), Wassaic, NY (I)
Saint-Gobain HTMS NV (High Tech Metal Seals), Mechelen, Belgium (M, NI, SS)
SCHOTT Electronic Packaging, (A Div. of SCHOTT North America, Inc.), Southbridge, MA (CM, P)
Sulzer, Chattanooga, TN (MS, MP)
Thermal Engineering International (TEi), Cerritos, CA (FG)
Westinghouse Electric Co. LLC, Cranberry Township, PA (MS, MP, M, P, RC)

75600 Security Services–*also see Consultants; Training*

A Analysis
C Cybersecurity
D Drug Testing
E Engineering
G Guards
SI Screening & Investigation

ARES Security Corp., Vienna, VA (A, E)
BHI Energy, Weymouth, MA (SI)
Boston Government Services, LLC (BGS), Oak Ridge, TN (A, E)
Burns & McDonnell, Kansas City, MO (A, E, SI)
Confidential Services, Inc., South Haven, MI (SI)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (A)
Enercon Services, Inc., (Talisman Div.), Kennesaw, GA (A, E)
EXCEL Services Corporation, Rockville, MD (A)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, E)
Imperia Engineering Partners LLC, Bordentown, NJ (A, E)
Right Brain Sekurity, Oswego, IL (A, E)
Sargent & Lundy, Chicago, IL (A, E)
VTT Technical Research Centre of Finland, VTT, Finland (A, E, SI)

75700 Security Structures

BW Barbed Wire, Tape
BG Barrier-Gates
F Fences
GO Gate Operators
G Gates
GS Guard Stations
GB Gunports, Bullet-Resistant
L Lockers, Weapon Storage
SB Security Booths (Man-Trap)
T Turnstiles
WP Wall Panels, Bullet-Resistant
WB Windows, Bullet-Resistant

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (G, GS)
CHP Consultants/Counts.Pro, Oak Ridge, TN (T)
✦Container Technologies Industries, LLC, Helenwood, TN (BG, GS, GB, WP, WB)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (BG, GO, G, WP, WB)
Dufrane Nuclear Shielding Inc., Winsted, CT (GB, WB)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (BW, BG, F, GO, G, GS, GB, L, SB, T, WP, WB)
Mirion Technologies, Inc., Atlanta, GA (T)
Par-Kut International, Inc., Harrison Twp., MI (GS, SB)
PMT Nuclear, Woodridge, IL (BG, F)
Presray Corp., (Div. of Pawling Corp.) (Critical Containment Solutions), Wassaic, NY (WP, WB)
SecurMAR, LLC, Zionsville, IN (BG, G, GS, GB, SB, T, WP, WB)

75850 Security Systems & Devices–*also see Consultants*

AI Anti-Intrusion, Indoor
AO Anti-Intrusion, Outdoor
AP Asset Protection (Anti-Removal), Electronic
AS Automated Security Patrol Robot
C Computerized
FI Fully Integrated
HS Homeland Security Devices
ID Intruder Detection (Laser, Microwave/Infrared)
ET Explosives Trace Detection
MD Metal (Weapon) Detectors
NV Night Vision Scopes & Devices
P Personal Alarm
PA Personnel Access Control
RT Railcar, Remote Tracking and Cargo Monitoring
TW Thermal Weapon Sights
VA Vehicle Access Control
VS Video Surveillance Systems (CCTV)
VT Video Transmission Systems
WI Water Intake, Anti-Intrusion
X X-ray Inspection Systems

AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (HS)
ARES Security Corp., Vienna, VA (AS, C, FI, HS, VA, VS, VT)
AVANTech, LLC, Knoxville, TN (VS)
AVANTech, LLC, Columbia, SC (VS)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (C, PA)
Enercon Services, Inc., (Talisman Div.), Kennesaw, GA (HS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (AI, AO, C, FI, HS, VS)
ISEC Monitoring Systems, Helsingborg, Sweden (VS)
Mirion Technologies, Inc., Atlanta, GA (C, HS, PA, VA)
ORTEC, Oak Ridge, TN (HS)
Radium Inc., Waynesboro, VA (VS, VT)
Right Brain Sekurity, Oswego, IL (HS)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (C, FI, VS, VT, WI)
SecurMAR, LLC, Zionsville, IN (AI, AO, MD, X)
Sidus Solutions LLC, San Diego, CA (AI, AO, FI, HS, ID, NV, VS, VT, WI)
Talisman Div. of Enercon, Arlington, VA (AO, ID)
✦Thermo Scientific - CIDTEC Cameras & Imagers, (Part of Thermo Fisher Scientific), Liverpool, NY (NV, VS)
Wolfgang Waelischmiller Solutions, München, Germany (C, X)

76400 Seismic Instrumentation & Testing

Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID
Framatome Inc., (North American Headquarters), Lynchburg, VA
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX
Kinectrics Inc., Toronto, Ontario, Canada
Kinemetrics, Inc., Pasadena, CA
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL
Paragon Energy Solutions, Fort Worth, TX
Pylon Electronics Inc., (Div. of Autrex) (Instrumentation Dept.), Ottawa, Ontario, Canada
Radics LLC, Kropyvnytskyi, Ukraine
Simpson Gumpertz & Heger (SGH), Chicago, IL
Westinghouse Electric Co. LLC, Cranberry Township, PA

77600 Servomechanisms

Framatome Inc., (North American Headquarters), Lynchburg, VA
NovaTech, Lynchburg, VA
Wolfgang Waelischmiller Solutions, München, Germany

77750 Shielding Design, Radiation–*also see Analysis; Consultants*

Advanced Nuclear LLC, East Petersburg, PA
Applied Analysis Corp., Reading, PA
BHI Energy, Weymouth, MA
Black & Veatch, Overland Park, KS
BWX Technologies, Inc., Lynchburg, VA
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID
Dufrane Nuclear Shielding Inc., Winsted, CT
Ellis & Watts Global Industries, Inc., Batavia, OH
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY
Framatome Inc., (North American Headquarters), Lynchburg, VA
Hopewell Designs, Inc., Alpharetta, GA

Hot Cell Services Corp., Kent, WA
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA
✦Joseph Oat Corp., Camden, NJ
Kinectrics Inc., Toronto, Ontario, Canada
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada
Mirion Technologies, Inc., Atlanta, GA
NovaTech, Lynchburg, VA
NuclearConsultants.com, Ann Arbor, MI
Nuclear Shielding Supplies & Service, Tucson, AZ
NV5/Dade Moeller, Richland, WA
PMT Nuclear, Woodridge, IL
Radium Inc., Waynesboro, VA
Red Wolf Associates, Cary, NC
Sargent & Lundy, Chicago, IL
Southwest Research Institute, San Antonio, TX
✦WMG, Inc., Peekskill, NY

77800 Shielding Materials, Rad.–*also see Containers; Doors; Neut. Absorbers; Windows*

AS Acryllic Sheeting Products, Beta-Shielding
A Aggregates, High-Density Concrete
B Blankets
CB Blocks, Concrete, Lead-Core
BH Blocks, Concrete, High-Density
BM Blocks, Modular
BC Boron Carbide Grain & Shapes
BR Bricks, Composite
BL Bricks, Lead
CM Castable Shielding Materials
CC Castings, Composite
CL Castings, Lead
CA Castles, Lead
CS Collars, Streaming
CW Container Wraps
CR Criticality Control
CU Curtain Shields
FS Frisker Shields
GN Gamma/Neutron Composite
G Glass, X-ray
IV In-Vessel Shields
LF Lead Free
LP Lead Plastic
LL Low-Level Shields, Lead/Steel
PW Pipe Wraps/Sleeves
PC Plugs, Closures
P Polyethylene
PB Polyethylene, Borated
RF Refueling Shields
TN Thermal Neutron Materials
TA Tungsten Alloys
WP Wall Panels
WS Water Shields, Modular (Gamma/Neutron)

F.N. Anderson & Assoc., Forest, VA (CR)
AVANTech, LLC, Knoxville, TN (LL, WP)
AVANTech, LLC, Columbia, SC (LL, WP)
CHP Consultants/Counts.Pro, Oak Ridge, TN (BL)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CR, CU, IV, LL, PC, RF, WS)
Dufrane Nuclear Shielding Inc., Winsted, CT (A, B, CB, BH, BM, BR, BL, CM, CC, CL, CS, CW, CR, CU, FS, GN, G, IV, LL, PW, PC, P, PB, RF, TN, TA, WP, WS)
✦EnergySolutions LLC, Salt Lake City, UT (CL, LL, WP)
Foss Therapy Services, Inc., North Hollywood, CA (TA)
Framatome Inc., (North American Headquarters), Lynchburg, VA (B)
Free Form Fibers, Saratoga Springs, NY (BC)
Frham Safety Products, Inc., Nashville, TN (PW)
Frontier Technology Corp., Xenia, OH (GN, TN)
Glidewell Specialties Foundry Co., Calera, AL (PC)
Lancs Industries, Albuquerque, NM (B, BR, BL, CU, FS, GN, LF, PW, P, TA, WS)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (AS, A, B, CB, BH, BM, BR, BL, CM, CL, CA, CS, CW, CU, GN, G, LF, LP, LL, PW, P, PB, RF, TA, WP)
MillenniTEK, LLC, Knoxville, TN (BC, BR, CM, CC)
✦NAC International Inc., Peachtree Corners, GA (BM, BR, CM, CC, CS, GN, IV, TN)
Niagara Energy Products (NEP), Niagara Falls, Ontario, Canada (A, CB, BM, BR, CM, CC, CW, LL, P, WP)
NuclearConsultants.com, Ann Arbor, MI (CR)
Nuclear Shielding Supplies & Service, Tucson, AZ (A, CB, BM, BC, BR, CM, GN, LF)
ORTEC, Oak Ridge, TN (LL)
Preferred Engineering Corp., (Sub. of Preferred Utilities Mfg. Corp.), Danbury, CT (RF)
Premier Technology, Inc., Blackfoot, ID (BL, CM, G, LL)
Radium Inc., Waynesboro, VA (AS, B, BR, CW, CU, GN, G, RF, TN, TA, WP, WS)
✦Reef Industries, Inc., Houston, TX (CW, P, RF)
Rich Industries Inc., New Philadelphia, OH (AS, CW, CU, P)
Robatel Technologies, LLC, Roanoke, VA (A, BM, BR, BL, CM, CL, GN, IV, TN)
RSO, Inc./Radiation Service Organization, Laurel, MD (BL, LL)
SCHOTT Electronic Packaging, (A Div. of SCHOTT North America, Inc.), Southbridge, MA (G)
Seafab Metals Co., (Div. of The Doe Run Co.), Casa Grande, AZ (BL, CL, LL)
Tri Nuclear Corp., Ballston Lake, NY (FS, WP)
Unified Engineering, Hamilton, Ontario, Canada (LL)
Vitto Corp., Kanagawa, Japan (CM)
Wagstaff Applied Technologies, Spokane, WA (BL, CM, CL, CW, CR, CU, IV, PW)

77900 Shoring–*also see Scaffolding*

Simpson Gumpertz & Heger (SGH), Chicago, IL

78700 Sleeves, Wall (Pipe)

✦Joseph Oat Corp., Camden, NJ
Rich Industries Inc., New Philadelphia, OH
Vigor (formerly Oregon Iron Works), Clackamas, OR

79360 Solid Waste Reduction Equipment & Tools, Radioactive

C Containment
CR Control Rod Crushers, Reducers
NW Neutron Window Reducers
P Packaging
SB Stellite Ball Punches
U Underwater Reduction Tools
VL Velocity Limiter Shears

Advanced Consulting Group, Inc., Chicago, IL (U)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (U)
✦American DND Inc., Grand Island, NY (C, P)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (P, U)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (P, U)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (P, U)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CR, U)
✦EnergySolutions LLC, Salt Lake City, UT (U, VL)
KUKA Systems UK Ltd, West Midlands, United Kingdom (P)
✦Major Tool & Machine, Inc., Indianapolis, IN (C)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (C)
✦M. Braun Inc., Stratham, NH (C)
✦Orano Federal Services, Charlotte, NC (C)
✦PacTec, Inc., Clinton, LA (C, P)
PAR Systems, LLC, Shoreview, MN (U)
Plant Decommissioning, Lake Villa, IL (U)
Siempelkamp NIS, Alzenau, Germany (P)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (C, U)
Unified Engineering, Hamilton, Ontario, Canada (C, CR)
Wagstaff Applied Technologies, Spokane, WA (C, CR)
Westinghouse Electric Co. LLC, Cranberry Township, PA (C, P, U)
✦WMG, Inc., Peekskill, NY (P)

79370 Sorbents

ES Environmental Spill
LR Liquid Radwaste

AVANTech, LLC, Knoxville, TN (LR)
AVANTech, LLC, Columbia, SC (LR)
Frham Safety Products, Inc., Nashville, TN (ES)
JRM Chemical Inc., Cleveland, OH (ES, LR)
Kinectrics Inc., Toronto, Ontario, Canada (ES)
METOIL, Praha, Czech Republic (LR)
Nochar, Inc., Indianapolis, IN (LR)
NUCON International, Inc., Columbus, OH (LR)
RSO, Inc./Radiation Service Organization, Laurel, MD (ES)

79700 Sources, Radioactive–*also see Radioisotopes; Testing Services*

CHP Consultants/Counts.Pro, Oak Ridge, TN
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA
RadQual, LLC, Idaho Falls, ID

81680 Storage Services

E Equipment
SF Spent Fuel

Barnhart Nuclear Services, Fairhope, AL (E)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (SF)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (SF)
Framatome Inc., (North American Headquarters), Lynchburg, VA (E)
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (E)
✦M. Braun Inc., Stratham, NH (E)
NuclearConsultants.com, Ann Arbor, MI (SF)
Orano TN, Columbia, MD (SF)
✦Petersen Inc., Ogden, UT (E)
PTP Spent Fuel Services, LLC, Grand Island, NY (E, SF)
Schulz Electric, Timken Power Systems, New Haven, CT (E)
UxC, LLC, Roswell, GA (SF)
Westinghouse Electric Co. LLC, Cranberry Township, PA (E, SF)

81710 Storage Systems, Spent-Fuel–*also see Containers; Racks*

D Dry
W Wet

Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (D, W)
✦Holtec International, Camden, NJ (D, W)
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (D, W)
✦Major Tool & Machine, Inc., Indianapolis, IN (D, W)
Mega-Tech Services, LLC, Cooksburg, PA (D)
✦NAC International Inc., Peachtree Corners, GA (D)
Orano TN, Columbia, MD (D)
PAR Systems, LLC, Shoreview, MN (W)
✦Precision Custom Components, LLC, York, PA (D, W)
Premier Technology, Inc., Blackfoot, ID (D)
Promation Nuclear, Oakville, Ontario, Canada (D, W)
PTP Spent Fuel Services, LLC, Grand Island, NY (D, W)
✦Reef Industries, Inc., Houston, TX (D)
Robatel Technologies, LLC, Roanoke, VA (D)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (D, W)

Unified Engineering, Hamilton, Ontario, Canada (D)
UxC, LLC, Roswell, GA (D, W)
Vigor (formerly Oregon Iron Works), Clackamas, OR (D, W)
Vitto Corp., Kanagawa, Japan (D, W)
Wagstaff Applied Technologies, Spokane, WA (D, W)
Westinghouse Electric Co. LLC, Cranberry Township, PA (D, W)

83110 Tags & Labels (Warning, Inventory, etc.)–*also see Health Phys*

Coastal Network, Inc., Charlottesville, VA
Frham Safety Products, Inc., Nashville, TN
InfoSight Corp., Chillicothe, OH
JSM Protective, Inc., Vero Beach, FL
RSO, Inc./Radiation Service Organization, Laurel, MD
Uticom Systems Inc., Coatesville, PA

83120 Tags, Valve

InfoSight Corp., Chillicothe, OH
Mohawk Safety, Manchester, CT
Uticom Systems Inc., Coatesville, PA

83150 Tanks, Storage–*also see Diaphrams; Inspection Services*

AL Aluminum
GF Glass Fiber
P Plastic
RC Rubber, Collapsible
S Steel
SS Steel, Stainless

Aerofin, (Sub. of Ampco-Pittsburgh Corp.), Lynchburg, VA (S, SS)
AVANTech, LLC, Knoxville, TN (S, SS)
AVANTech, LLC, Columbia, SC (S, SS)
✦Container Technologies Industries, LLC, Helenwood, TN (S)
Corrosion Control Services, Inc., (CCSI Engineered Diaphragm Div.), Davenport, IA (RC)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (SS)
Dubose National Energy Services, Inc., Clinton, NC (S, SS)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (AL, S, SS)
Energy Steel, Lapeer, MI (AL)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (AL, S, SS)
Framatome Inc., (North American Headquarters), Lynchburg, VA (S, SS)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (S, SS)
✦Joseph Oat Corp., Camden, NJ (S, SS)
✦Major Tool & Machine, Inc., Indianapolis, IN (AL, S, SS)
NuSource LLC, Alexandria, VA (S, SS)
Paragon Energy Solutions, Fort Worth, TX (S, SS)
✦Petersen Inc., Ogden, UT (AL)
PMT Nuclear, Woodridge, IL (AL, S, SS)
✦Precision Custom Components, LLC, York, PA (S, SS)
Premier Technology, Inc., Blackfoot, ID (AL, S, SS)
Robatel Technologies, LLC, Roanoke, VA (SS)
✦SSM Industries, Inc., Pittsburgh, PA (AL, S, SS)
Tri Nuclear Corp., Ballston Lake, NY (SS)
Vigor (formerly Oregon Iron Works), Clackamas, OR (S, SS)
Vitto Corp., Kanagawa, Japan (AL)
Wagstaff Applied Technologies, Spokane, WA (AL, S, SS)
Worthington Industries, Columbus, OH (S, SS)

83210 Tape

C Cloth, Nuclear
E Electrical Splicing Tape
F Foam
MS Moisture-Sensitive
RS Reinforced Strapping, Nuclear
WL Warning, Luminescent

Coastal Network, Inc., Charlottesville, VA (C, WL)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (E)
Frham Safety Products, Inc., Nashville, TN (C, MS, RS, WL)
JSM Protective, Inc., Vero Beach, FL (C, MS, RS, WL)
Lancs Industries, Albuquerque, NM (C, MS, RS, WL)
Protective Plastics, Inc., Greenville, SC (C, RS)
✦Reef Industries, Inc., Houston, TX (WL)
Rich Industries Inc., New Philadelphia, OH (C, RS)
RSO, Inc./Radiation Service Organization, Laurel, MD (C, WL)

83600 Television Systems (CCTV)–*also see Security Systems; Video Services*

C Conventional
HT High-Temperature
M Miniature (Remote Viewing)
PI Pipe Inspection
U Underwater, Color, High-Radiation
W Welding Arc Viewing (Color)

AVANTech, LLC, Knoxville, TN (C)
AVANTech, LLC, Columbia, SC (C)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C)
ISEC Monitoring Systems, Helsingborg, Sweden (C, M, PI, U)
Lights Camera Action, LLC, Gilbert, AZ (C, M, PI, U)
Magnatech LLC, East Granby, CT (W)
Mirion Technologies, Inc., Atlanta, GA (C, HT, M, PI, U)
Mirion Technologies (IST) Corp., (Sensing Systems Div.), Horseheads, NY (C, HT, M, PI, U, W)
Radium Inc., Waynesboro, VA (C, HT, M, PI, U, W)
Remote Ocean Systems (ROS), San Diego, CA (C, M, U)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (C, HT, M, PI, U, W)
Sensor Networks, Inc., State College, PA (C, HT, M, PI, U)
Sidus Solutions LLC, San Diego, CA (C, HT, M, PI, U)
Siempelkamp NIS, Alzenau, Germany (M, U)
✦Thermo Scientific - CIDTEC Cameras & Imagers, (Part of Thermo Fisher Scientific), Liverpool, NY (C, M, PI, U, W)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (U)

84150 Test Equipment & Supplies–*also see Health Physics Equip.; Nondestructive Testing*

A Automated
CS Capacitance Strain Gauging
CP Coating Porosity Detection
CT Coating Thickness Gauging
C Concrete Inspection
EC Eddy Current
EM Electric Motors
ES Electrical Systems & Components
E Environmental
FO Fiber Optic
HE HEPA Filter
II Infrared Imaging
IC Instrumentation & Control
LR Leak-Rate, Local
M Manual
MT Materials
ND Nondestructive
PH pH Measurement
P Portable
PA Power Apparatus
RT Resistance Temperature Detectors
S Stationary
SC Structures/Components
U Ultrasonic
UC Ultrasonic Couplant
VL Vacuum Leak Testers, Tube
V Valve
VM Valve, Motor-Operated, Diagnostic
VS Valve, Solenoid Operated, Diagnostic
V Vibration

Analysis and Measurement Services Corp. (AMS), (Including CHAR Services), Knoxville, TN (A, IC, ND)
CBS Nuclear Services, Inc., Matthews, NC (ES)
CM Technologies Corp., Coraopolis, PA (A, EM, ES, IC, ND)
Curtiss-Wright Nuclear Division, Anatec, Brea, CA (A, EC, ND, U)
Curtiss-Wright Nuclear Division, LMT, Hutchinson, MN (CT, ND, U)
EFCO USA, Inc., Charlotte, NC (P, S, V)
Elcometer Inc., Warren, MI (CP, CT, C, EC, E, ND, U, UC)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, EC, EM, ES, IC, M, MT, ND, PH, P, PA, S, SC, U, V, VM, VS, V)
GLSEQ, LLC, Huntsville, AL (EM, FO, RT)
Heat Exchanger Products Corp. (HEPCO), Hingham, MA (VL)
HydroPro Inc., Bourbon, MO (ND, P)
InterTest, Inc., Columbia, NJ (A, CT, EC, II, ND, P, U, UC)
✦M. Braun Inc., Stratham, NH (SC)
Mirion Technologies, Inc., Atlanta, GA (RT)
Mohawk Safety, Manchester, CT (HE)
Netzsch Instruments North America LLC, Burlington, MA (MT, ND)
NovaTech, Lynchburg, VA (A)
NV5/Dade Moeller, Richland, WA (C)
OTEK Corp., Tucson, AZ (IC, PH)
PAR Systems, LLC, Shoreview, MN (A, ND, U)
RADeCO, Inc., Plainfield, CT (E)
Rockwell Automation, Inc., Milwaukee, WI (A, EM, ES, E)
Schulz Electric, Timken Power Systems, New Haven, CT (EM)
Sensor Networks, Inc., State College, PA (ND)
TEiC, Duncan, SC (EC, VL)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (VM)
TRILLIUM Valves USA, Ipswich, MA (V, VM, VS)
Valcor Engineering Corp., (Valcor Nuclear Div.), Springfield, NJ (V)
Westinghouse Electric Co. LLC, Cranberry Township, PA (EM, RT)

84600 Testing Services–*also see Analysis; Maintenance Serv.; Nondestructive Testing*

AI Alloy Identification (On-Site)
C Coatings
CD Corrosion Detection
EM Electric Motors
ES Electrical Systems & Components
EQ Environmental Qualification
FR Fire Resistance/Flammability
FL Flow
FM Fracture Mechanics
I Infrared
IC Instrumentation & Control
LF Laminar Flow Facilities
LD Leak Detection, Tube
LN Leak, Nuclear Gauge
LS Leak, Radioactive Sealed Source
LR Leak-Rate, Integrated
LL Leak-Rate, Local
M Materials
ND Nondestructive
PH Photometric Testing
PL Plastics/Polymers
P Pumps
QS Quality Services
SP Sealed Sources (Pressure, Temperature)
S Seismic
SI Siren Systems
ST Structures
TC Transport Containers
U Ultrasonic
V Vibration
WT Wall Thinning Detection, Tube

Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (C, EM, P)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (AI, M, ND)
Analysis and Measurement Services Corp. (AMS), (Including CHAR Services), Knoxville, TN (ES, IC, ND)
Anamet, (a Div. of Acuren Inspection, Inc.), Hayward, CA (C, I, M, PL)
AVANTech, LLC, Knoxville, TN (ES, LF, LR, LL, M, ND, P)
AVANTech, LLC, Columbia, SC (ES, LF, LR, LL, M, ND, P)
Basic PSA, (Anvil International, LLC), Johnstown, PA
BWX Technologies, Inc., Lynchburg, VA (C, EQ, FM, LD, LS, M, ND, SP, U)
CBS Nuclear Services, Inc., Matthews, NC (ES)
CM Technologies Corp., Coraopolis, PA (EM, ES, IC, ND)
Curtiss-Wright EST Group, Hatfield, PA (LD)
Curtiss-Wright Nuclear Division, Anatec, Brea, CA (LD, ND, QS, U, WT)
Curtiss-Wright Nuclear Division, LMT, Hutchinson, MN (C, CD, IC, ND, QS, U)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (M, ND, PL)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (EM, ES, EQ, I, IC, LL, QS, S, ST, V)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (EQ, S)
Day & Zimmermann, Philadelphia, PA
Ellis & Watts Global Industries, Inc., Batavia, OH (EM, ES, EQ, FL, IC, LD, P, S, V)
Exelon PowerLabs, Coatesville, PA (ES, EQ, FL, FM, I, IC, LF, LR, LL, M, ND, PH, PL, QS, SP, U, V)
Framatome Inc., (North American Headquarters), Lynchburg, VA (CD, EM, ES, EQ, FR, FM, IC, LF, LD, LN, LR, LL, M, ND, PH, P, QS, S, ST, U, V, WT)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (C, CD, ND, U)
Hennigan Engineering LLC, Hingham, MA (LD)
HydroPro Inc., Bourbon, MO (LD, ND)
Imperia Engineering Partners LLC, Bordentown, NJ (C, ND, U, WT)
InterTest, Inc., Columbia, NJ (C, I, ND, U)
Kinectrics Inc., Toronto, Ontario, Canada (C, CD, EM, ES, EQ, FL, FM, IC, LD, LN, M, ND, PL, P, QS, S, U, V, WT)
Kinemetrics, Inc., Pasadena, CA (S)
Lambda Technologies, Cincinnati, OH (FM, M)
Lucideon, Durham, NC (C, CD, FM, M)
Materials and Chemistry Laboratory, Inc., (MCLinc), Oak Ridge, TN (M)
Matom Ltd., North Wales, United Kingdom (CD)
Mirion Technologies, Inc., Atlanta, GA (IC)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (C, EM, ES, EQ, IC, M, ND, QS, S, V)
Netzsch Instruments North America LLC, Burlington, MA (FR, IC, M, ND)
NovaTech, Lynchburg, VA (FL)
Nucleonova S.L., Valencia, Spain (QS)
PMT Nuclear, Woodridge, IL (EQ, FR, FL, IC, LL, M, P, S, V)
Power System Sentinel Technologies, LLC, Warrior, AL
Rockwell Automation, Inc., Milwaukee, WI (FL, IC)
Rogante Engineering Office, Civitanova Marche, Italy (C, M, ND, U)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (AI, C, CD, EM, ES, EQ, FR, FL, FM, I, IC, LF, LD, LN, LS, LR, LL, M, ND, PH, PL, P, QS, SP, S, SI, ST, TC, U, V, WT)
Rolls-Royce Civil Nuclear SAS, Meylan, France (ES, IC)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (ES, IC)
RSO, Inc./Radiation Service Organization, Laurel, MD (LS)
Sargent & Lundy, Chicago, IL (C, CD, EQ, FM, IC, M, ND, S, ST, V)
Schulz Electric, Timken Power Systems, New Haven, CT (EM, ES, I, ND, V)
SDT Ultrasound Solutions, Cobourg, Ontario, Canada (U, V)
SIET, Piacenza, Italy (FL, LF, P, QS)
Simpson Gumpertz & Heger (SGH), Chicago, IL (C, CD, FR, FM, M, ND, S, ST, TC, V, WT)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (FM, ND, U)
Southwest Research Institute, San Antonio, TX (C, CD, ES, EQ, FR, FL, FM, M, ND, S, ST, TC, V, WT)
Structural Integrity Assoc., Inc., San Jose, CA (CD, FM, PH, S)
Switchgear Solutions, Inc., Tucson, AZ (EM, ES)
System One, Pittsburgh, PA (ND)
TEiC, Duncan, SC (LD)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (LS)
Thermal Engineering International (TEi), Cerritos, CA
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (C, CD, ND, QS, U)

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Westinghouse Electric Co. LLC, Cranberry Township, PA (CD, EM, EQ, FL, LD, ND, P, S, U)

86130 Tools

C Custom-Made
D Drop Prevention
E Electric
F FME
F FOSAR Retrieval
H Hydraulic
P Pneumatic
VA Vacuum-Assisted

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (C, E, H, P)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (C)
ATS Industrial Automation, Inc. Nuclear (Canada), Cambridge, Ontario, Canada (C, E, H, P)
ATS Industrial Automation, Inc. - Nuclear (UK), Blaby, Leicester, United Kingdom (C, E, H, P)
ATS Industrial Automation, Inc. - Nuclear (USA), (ATS Ohio, Inc.), Lewis Center, OH (C, E, H, P)
Coastel Cable Tools, Inc., East Syracuse, NY (C, E)
Curtiss-Wright Nuclear Division, Nova, Middleburg Heights, OH
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (C, E, H, P)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (C, E, H, P)
Desco Mfg. Co., Inc., Rancho Santa Margarita, CA (C, E, P, VA)
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY (C)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, E, H, P)
HydroPro Inc., Bourbon, MO (C)
JNT Technical Services Inc., Little Ferry, NJ (C)
Lights Camera Action, LLC, Gilbert, AZ (E)
Nord-Lock Inc., Clinton, PA (C)
NovaTech, Lynchburg, VA (C)
PAR Systems, LLC, Shoreview, MN (C, E)
✦Petersen Inc., Ogden, UT (C)
Plant Decommissioning, Lake Villa, IL (C, E, H, P)
Promation Nuclear, Oakville, Ontario, Canada (C, E, H, P)
Roberts Engineering Services, Inc., Stuart, FL (C, H, P)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (C)
Sensor Networks, Inc., State College, PA (C)
Siempelkamp NIS, Alzenau, Germany (C, E, H, P)

86250 Trailers, Spent-Fuel Transport

Framatome Inc., (North American Headquarters), Lynchburg, VA

86260 Trailers, Transport

Barnhart Nuclear Services, Fairhope, AL
Framatome Inc., (North American Headquarters), Lynchburg, VA
Talbert Manufacturing, Rensselaer, IN
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA

86300 Training–*also see Consultants; Health Physics Services; Training Centers; Training Materials*

AT Air Treatment
AC Auditing, Codes & Standards
AE Auditing, Environmental
CH Chemistry
C Communications
CP Computer Users/Computer Personnel
CM Construction Management Personnel
CS Crane & Rigging Safety
D Decommissioning
EP Emergency Planning & Response
EM Engineering Management
EE Engineers, Electrical
ME Engineers, Mechanical
ES Engineers, Structural
EL Environmental Laws & Regulation
EQ Equipment Qualification
FP Fire Protection
FD Fitness-for-Duty, Behavioral Observation
FC Fuel Cycle/Performance Analysis
FT Fuel Transport/Storage
HV HVAC Maintenance
I Instructors, Classroom & Simulator
LD Leadership Development
L Licensing
M Maintenance
MN Management
NT Nondestructive Testing
OE Organizational Effectiveness
OS OSHA Compliance
PC Process Control Statistical
PM Project Management
QA Quality Assurance/Quality Control
RM Radiation Management (ALARA)
RP Radiation Protection
RC Radiochemistry
RA Reliability Analysis
RS Respiratory Protection
RT Root Cause Analysis
SE Safety Evaluation
S Scaffolding
SP Security Personnel
SQ Seismic Qualification
SR Simulators, Radiation
TB Team Building
TE Technicians, Electrical
TI Technicians, Instrumentation and Control
TL Technicians, Laboratory
TM Technicians, Mechanical
TS Technicians, Security
WM Waste Management
WP Waste Packaging Transportation & Disposal
WC Water Chemistry

Advanced Consulting Group, Inc., Chicago, IL (EM, ES, MN, PM)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (EQ)
American Crane & Equipment Corp., Douglassville, PA (CS)
Analysis and Measurement Services Corp. (AMS), (Including CHAR Services), Knoxville, TN (EE, EQ, TE, TI)
F.N. Anderson & Assoc., Forest, VA (QA)
Applied Analysis Corp., Reading, PA (ME, SE)
Applied Science Professionals, LLC, (ASP-LLC), Salt Lake City, UT (RM, RP, RT)
ARES Security Corp., Vienna, VA (EP, RM, SP, TB)
✦Argonne National Laboratory, (Decommissioning Training), (EOF Div.), Argonne, IL (MN)
See advertisement on page 94
AVANTech, LLC, Knoxville, TN (TE, WM, WC)
AVANTech, LLC, Columbia, SC (TE, WM, WC)
Bevelacqua Resources, Richland, WA (EP, QA, RM, RP, RS, SE, WM)
BHI Energy, Weymouth, MA (CH, CM, CS, EP, EM, EE, ME, ES, EQ, HV, I, M, PM, QA, RM, RP, RC, RS, SE, S, TE, TI, TL, TM, WM, WC)
Black & Veatch, Overland Park, KS (EM, EE, ME, ES, EQ, OE, PM, QA, RT, SE, SQ)
Boston Government Services, LLC (BGS), Oak Ridge, TN (AC, AE, CP, EM, LD, QA, SE)
Burns & McDonnell, Kansas City, MO (EE, ME, ES, EL, FP, PM, QA)
Cabrera Services Inc., East Hartford, CT (RM, RP, RC)
Chase Environmental Group, Inc., Troy, IL (RP)
Chesapeake Nuclear Services, Inc., Annapolis, MD (RP, RC)
CM Technologies Corp., Coraopolis, PA (TE, TI)
CTR Technical Services, Inc., Manitou Springs, CO (I)
Curtiss-Wright Nuclear Division, Anatec, Brea, CA (NT)
Curtiss-Wright Nuclear Division, LMT, Hutchinson, MN (NT, QA)
Curtiss-Wright Nuclear Division, NETCO, Danbury, CT (WM)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (EQ, M, SQ)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (CH, EP, EQ, I, L, M, QA, RP, RC, RA, RT, SE)
DB2 Consulting Inc., Baltimore, Ontario, Canada (MN)
DCS Systems, Inc., Simsbury, CT (AC, FC, QA, RT)
Decidia Research & Consulting, Sabadell, Barcelona, Spain (AE, C, SE, WM)
The Delphi Groupe, Inc., Austin, TX (AC, AE, CH, EP, EL, FP, PM, QA, RM, RP, RC, RS, TL, WM, WC)
Deytec, Inc., Ashburn, VA (AC, FP, L, SE)
DW James Consulting, North Oaks, MN (WM, WP)
EFCO USA, Inc., Charlotte, NC (M)
Elcometer Education Institute, Warren, MI (AC, AE, QA)
✦EnergySolutions LLC, Salt Lake City, UT (FT)
✦Energy, Technology and Environmental Business Association, Oak Ridge, TN (WM)
Engineering Planning and Management, Inc., Framingham, MA (AC, EQ, FP)
EXCEL Services Corporation, Rockville, MD (AE, EM, EE, ME, ES, FP, L, M, MN, RT, SE, SP, TB)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AC, CH, CS, EP, EM, EE, ME, FP, FC, FT, I, M, NT, PM, QA, RM, RP, RC, SE, TE, TI, TL, TM)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (RC)
Thomas Gray & Associates, Inc., (Owner of Environmental Mgmt. & Controls, Inc.), Orange, CA (WM)
GSE Hyperspring, Columbia, MD (AT, AC, AE, CH, EP, EM, EE, ME, ES, EL, EQ, FP, I, LD, MN, OE, OS, PC, PM, QA, SR)
HF Controls Corp., (Sub. of Doosan Heavy Industries & Construction Co., Ltd.), Carrollton, TX (EQ, L, SQ)
HukariAscendent, Wheat Ridge, CO (L, QA, SE)
Human Resources Consulting, Gallatin, TN
Kinectrics Inc., Toronto, Ontario, Canada (D, EE, ME, EQ, L, NT, RM, RP, RC, RT, SQ, WM)
Kinemetrics, Inc., Pasadena, CA (SQ)
Lancs Industries, Albuquerque, NM (RM, RP, WM)
LeBlond and Associates, LLC, Libertyville, IL (I, L, QA, SE)
A. C. Macris, Consultants, Mystic, CT (EM, I, TB)
METOIL, Praha, Czech Republic (RC)
✦NAC International Inc., Peachtree Corners, GA (FC, FT)
National Inspection & Consultants, Fort Myers, FL (NT)
North Wind Group, Idaho Falls, ID (AE, SE, SQ, TE, TI, TL, TM, WM)
NovaTech, Lynchburg, VA (ME, TM)
Nuclear Technology Services, Inc., Roswell, GA (RP, RC)
Nuclear Training Institute, Norcross, GA (AC, EQ, LD, MN, NT, OE, PM, QA, RT, SQ, TB)
Nucleonova S.L., Valencia, Spain (QA)
NUCON International, Inc., Columbus, OH (AT, NT)
NV5/Dade Moeller, Richland, WA (AE, EP, EL, OS, RM, RP, RS)
ORTEC, Oak Ridge, TN (RP, RC)
Pacific Radiation, Altadena, CA (RP)
PMT Nuclear, Woodridge, IL (AT, HV)
Power & Energy Systems Services, Oradell, NJ (CP, ME, TI, TM)
Powerfect Service, Inc., Brick, NJ (M)
Power System Sentinel Technologies, LLC, Warrior, AL (EE, TE)
Prospect Law Ltd., London, United Kingdom (EL, FT)
PROTEM USA, Evergreen, CO (M)
Radiation Control, Inc., Tallahassee, FL (RM, RP)
Radiation Safety & Control Services, Inc., Seabrook, NH (AE, D, RM, RP, TI)

Radiological Solutions Inc., Rockdale, IL (CH, RC, WC)
Red Wolf Associates, Cary, NC (EQ, LD, MN, TB)
ReNuke, Oak Ridge, TN (OS, RM, RS, SE, WM)
RETAQS, Inc., Blue Bell, PA (EM, FC, MN)
Right Brain Sekurity, Oswego, IL (SP)
Rolls-Royce Civil Nuclear SAS, Meylan, France (TI)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (TI)
RSO, Inc./Radiation Service Organization, Laurel, MD (EP, RM, RP, WM)
Sargent & Lundy, Chicago, IL (AT, AC, AE, CH, CP, CM, EP, EM, EE, ME, ES, EL, EQ, FP, L, M, MN, NT, PM, QA, RM, RP, RA, RT, SE, SQ, TB, WM, WC)
Siempelkamp NIS, Alzenau, Germany (D, EQ, TE, TM)
Southwest Research Institute, San Antonio, TX (EL, FP, RP, RA)
System One, Pittsburgh, PA (NT, OS, QA, SE)
Talisman Div. of Enercon, Arlington, VA (D, EL, FD, L, SP)
Teletrix, Pittsburgh, PA (EP, SR)
Tetra Tech Inc., Richland, WA (AC, AE, EL, EQ, FP, QA)
Thermal Engineering International (TEi), Cerritos, CA
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (QA)
UxC, LLC, Roswell, GA
VGSSolutions, Mississauga, Ontario, Canada (L, SE)
Volian Enterprises, Inc., Murrysville, PA (AC, EP, EM, EE, ME, FD, I, PC, SE)
VTT Technical Research Centre of Finland, VTT, Finland (SE)
Westinghouse Electric Co. LLC, Cranberry Township, PA (FC, FT, I, NT, RT, SE, TI)
✦WMG, Inc., Peekskill, NY (AC, CP, EL, WM)
✦WM Symposia, Tempe, AZ (WM)
See advertisement on page 152
Zetec, Inc., Snoqualmie, WA (NT)

86400 Training Centers, Facilities–*also see Training; Training Materials*

Elcometer Education Institute, Warren, MI
Framatome Inc., (North American Headquarters), Lynchburg, VA
GSE Hyperspring, Columbia, MD
Nuclear Training Institute, Norcross, GA
Radiation Safety & Control Services, Inc., Seabrook, NH
Rolls-Royce Civil Nuclear SAS, Meylan, France
Rolls-Royce Nuclear I&C, Pittsburgh, PA
Technical Management Services, Inc., New Hartford, CT

86500 Training Materials, Courseware–*also see Mockup Design; Training; Training Centers*

AV Audio-Visual Aids
CA Computer-Aided
DV Digital Video, Interactive
M Models, Mockups
T Textual

ARES Security Corp., Vienna, VA (M)
Bevelacqua Resources, Richland, WA (T)
Boston Government Services, LLC (BGS), Oak Ridge, TN (AV, CA, DV)
Deytec, Inc., Ashburn, VA (AV, CA, T)
Elcometer Education Institute, Warren, MI (T)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AV, CA, M, T)
GSE Hyperspring, Columbia, MD (AV, CA, DV, M, T)
LeBlond and Associates, LLC, Libertyville, IL (CA, T)
A. C. Macris, Consultants, Mystic, CT (CA, M, T)
NovaTech, Lynchburg, VA (M, T)
Pacific Radiation, Altadena, CA (T)
PMT Nuclear, Woodridge, IL (M)
Power & Energy Systems Services, Oradell, NJ (AV, T)
Radiation Control, Inc., Tallahassee, FL (CA, DV, T)
Sargent & Lundy, Chicago, IL (AV, CA, DV, T)
Siempelkamp NIS, Alzenau, Germany (M)
Technical Management Services, Inc., New Hartford, CT (T)
Volian Enterprises, Inc., Murrysville, PA (T)
Westinghouse Electric Co. LLC, Cranberry Township, PA (M)
✦WMG, Inc., Peekskill, NY (CA, T)

87000 Transport Services

C Consulting/Transport Management
DC Dry Cask
HC Heavy Components
IR Intermodal/Rail
L Liners
HL Radioactive, High-Level
LL Radioactive, Low-Level
TP Transload Facility, Permanent
TT Transload Facility, Temporary

Accelerated Decommissioning Partners - ADP, Dallas, TX (DC, HL, LL)
AVANTech, LLC, Knoxville, TN (L)
AVANTech, LLC, Columbia, SC (L)
Barnhart Nuclear Services, Fairhope, AL (HC, IR, LL)

Bigge Power Constructors, (Affl. of Bigge Crane and Rigging Co.), San Leandro, CA (C, HC)
Chase Environmental Group, Inc., Troy, IL (C, LL)
Dufrane Nuclear Shielding Inc., Winsted, CT (C, IR)
Ebersen, Inc., Minneapolis, MN (C, HC)
✦EnergySolutions LLC, Salt Lake City, UT (C, HC, IR, HL, LL)
Framatome Inc., (North American Headquarters), Lynchburg, VA (C, HC, IR, HL, LL)
GNS Gesellschaft fur Nuklear-Service mbH, Essen, Germany (DC, HL)
✦I.C.E. Service Group, Inc., Moon Township, PA (C, DC, HC, IR, L, HL, LL, TP, TT)
Kinectrics Inc., Toronto, Ontario, Canada (C, L, LL)
Konecranes Nuclear Equipment & Services LLC, New Berlin, WI (DC)
Miller Transfer, Rootstown, OH (C, DC, HC, LL)
✦NAC International Inc., Peachtree Corners, GA (C, DC, HL)
North Wind Group, Idaho Falls, ID (C, IR)
Orano Decommissioning Services, Hudson, MA (DC, HL, LL)
✦Orano Federal Services, Charlotte, NC (DC, IR, L, HL, LL, TP, TT)
Orano TN, Columbia, MD (C, DC, IR, HL, LL)
Prospect Law Ltd., London, United Kingdom (C)
RSO, Inc./Radiation Service Organization, Laurel, MD (LL, TP)
Studsvik, Inc., Atlanta, GA (HC, IR, LL)
US Ecology, Inc., Livonia, MI (LL)
Waste Control Specialists LLC, Andrews, TX (LL)
Wheelift Transporters, Waverly, IA (DC, HC)

87380 Tritium Handling Equipment

Kinectrics Inc., Toronto, Ontario, Canada
✦Major Tool & Machine, Inc., Indianapolis, IN
NUCON International, Inc., Columbus, OH
Wagstaff Applied Technologies, Spokane, WA

87395 Tritium Recycle & Extraction Equipment

✦Major Tool & Machine, Inc., Indianapolis, IN

87400 Tritium Removal Equipment

ISO-PACIFIC Remediation Technologies, Inc., Richland, WA
✦M. Braun Inc., Stratham, NH
NUCON International, Inc., Columbus, OH
✦Orano Federal Services, Charlotte, NC

90100 Vacuum Equipment & Accessories–*also see Cleaning Equip.; Filters*

Coastal Network, Inc., Charlottesville, VA
Desco Mfg. Co., Inc., Rancho Santa Margarita, CA
E. H. Wachs, Lincolnshire, IL
HI-Q Environmental Products Co., Inc., San Diego, CA
Master-Lee Engineered Products Inc., Latrobe, PA
NovaTech, Lynchburg, VA
Pave Technology Co., Dayton, OH
RADeCO, Inc., Plainfield, CT
Schutte and Koerting, Trevose, PA
Tri Nuclear Corp., Ballston Lake, NY
✦Underwater Construction Corp., Essex, CT

90250 Valve Operators (Actuators)

A Air
ES Electric Solenoid
EH Electrohydraulic
EX Explosive-Activated
H Hydraulic
MN Manual
M Motor

BHI Energy, Weymouth, MA (A, M)
Conval, Inc., Enfield, CT (A, ES, EH, H, MN, M)
Dragon Valves, Inc., Norwalk, CA (A)
E. H. Wachs, Lincolnshire, IL (A, H, M)
Ellis & Watts Global Industries, Inc., Batavia, OH (A, EH)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, ES, EH, H, MN, M)
KSB, Inc., Henrico, VA (A, MN, M)
Mirion Technologies, Inc., Atlanta, GA (EX)
Newman Hattersley Ltd., Mississauga, Ontario, Canada (A, MN)
Paragon Energy Solutions, Fort Worth, TX (A, ES, H, M)
PMT Nuclear, Woodridge, IL (A, ES, EH, H, MN, M)
Schulz Electric, Timken Power Systems, New Haven, CT (M)
✦SSM Industries, Inc., Pittsburgh, PA (A, ES, EH, MN, M)
Valcor Engineering Corp., (Valcor Nuclear Div.), Springfield, NJ (ES)
Westinghouse Electric Co. LLC, Cranberry Township, PA (A, ES, EH, EX, H, MN, M)

90280 Valve Packing Removal Equipment

Curtiss-Wright Nuclear Division, AP Services, Middleburg Heights, OH
Framatome Inc., (North American Headquarters), Lynchburg, VA
KSB, Inc., Henrico, VA

90320 Valve-Reseating Equipment, On-line

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC
EFCO USA, Inc., Charlotte, NC
Framatome Inc., (North American Headquarters), Lynchburg, VA

90330 Valve Stem Gland Packing Systems, Live-Loaded

BNL Industries, Inc., Vernon Rockville, CT
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL
Curtiss-Wright Nuclear Division, AP Services, Middleburg Heights, OH
KSB, Inc., Henrico, VA
Westinghouse Electric Co. LLC, Cranberry Township, PA

90600 Valves, Check, Stop Check

AC Air-Cylinder-Assisted
B Ball
CC Controlled-Closure
NS Non-Slam
PO Piston-Operated
SL Spring-Loaded
ST Swing Type
SA Swing Type, Alloy
TD Tilting Disk

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (AC, B, CC, NS, PO, SL, ST, SA, TD)
BNL Industries, Inc., Vernon Rockville, CT (NS, SL)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (B, PO, SL, ST, SA)
Conval, Inc., Enfield, CT (B, PO, SL)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (NS, SL, ST, SA)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (B)
DFT Inc., Exton, PA (NS, SL)
Dragon Valves, Inc., Norwalk, CA (CC, SL)
Framatome Inc., (North American Headquarters), Lynchburg, VA (AC, B, CC, NS, PO, SL, ST, SA, TD)
KSB, Inc., Henrico, VA (AC, B, PO, SL, ST, SA, TD)
NuSource LLC, Alexandria, VA (B, PO, SL)
Paragon Energy Solutions, Fort Worth, TX (B, ST, SA, TD)
Schutte and Koerting, Trevose, PA (AC, PO, ST, SA)
TRILLIUM Valves USA, Ipswich, MA (AC, CC, NS, PO, SL, ST)
Valcor Engineering Corp., (Valcor Nuclear Div.), Springfield, NJ (CC, PO, SL)
ValvTechnologies, Inc., Houston, TX (CC, NS)
Westinghouse Electric Co. LLC, Cranberry Township, PA (ST, SA)

90800 Valves, Control

F Flow
FA Flow, Acoustic Emission
I Intelligent
P Pressure
T Temperature
V Vacuum

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (F, FA, I, P, T, V)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (F, P)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (F, I, P, T, V)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (F, P, T)
DFT Inc., Exton, PA (F, P)
Dragon Valves, Inc., Norwalk, CA (F)
Framatome Inc., (North American Headquarters), Lynchburg, VA (F, FA, I, P, T, V)
Mirion Technologies, Inc., Atlanta, GA (F)
NuSource LLC, Alexandria, VA (F, P)
Paragon Energy Solutions, Fort Worth, TX (F)
RADeCO, Inc., Plainfield, CT (V)
Schutte and Koerting, Trevose, PA (F, P)
TRILLIUM Valves USA, Ipswich, MA (F, P, T)
Valcor Engineering Corp., (Valcor Nuclear Div.), Springfield, NJ (F, P, T, V)
Westinghouse Electric Co. LLC, Cranberry Township, PA (F, P, T, V)

91000 Valves, Gate

B Bellows Seal
JA Jacketed Alloy
K Knife
PS Parallel Slide Type
W Wedge Type

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (B, JA, K, PS, W)
CFM/VR-TESCO, LLC Continental Field Machining, Elgin, IL (PS, W)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (PS, W)
Conval, Inc., Enfield, CT (B, W)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (PS)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (B)
Framatome Inc., (North American Headquarters), Lynchburg, VA (B, JA, K, PS, W)
KSB, Inc., Henrico, VA (B, K, PS, W)
Paragon Energy Solutions, Fort Worth, TX (PS, W)
TRILLIUM Valves USA, Ipswich, MA (PS)
ValvTechnologies, Inc., Houston, TX (PS)

91260 Valves, Other

BW Backwater
B Ball
BU Burner
BF Butterfly
D Diaphragm
EF Excess-Flow
FS Fail-Safe
FI Feedwater Isolation
FL Filter, In-Line
FD Fire Deluge
FM Flow Monitoring/Alarm System
FB Flush Bottom Tank
G Globe
GB Globe, Bellows
IM Instrumentation Manifold
IS Isolation Shutoff
LB Line-Blind
MS Main Steam Isolation
M Miniature

N Needle
P Packless
PL Plastic-Lined
PG Plug
PR Pressure Regulating
PU Pump Recirculation
Q Quick-Opening & -Closing
R Ram-Type
RS Relief, Safety
SL Slurry
SO Solenoid
V Vacuum

Alison Control Inc., Fairfield, NJ (FD)
AVANTech, LLC, Knoxville, TN (BW, B, BF, D, SO, V)
AVANTech, LLC, Columbia, SC (BW, B, BF, D, SO, V)
BHI Energy, Weymouth, MA (BF, G, MS)
BNL Industries, Inc., Vernon Rockville, CT (B, EF, FS, Q, V)
Camfil USA, Washington, NC (FL)
CFM/VR-TESCO, LLC Continental Field Machining, Elgin, IL (MS)
C.J. Enterprises, (Div. of C.J. Instruments, Inc.), Tarzana, CA (PR)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (B, BF, G, PG, PR, SO)
Conval, Inc., Enfield, CT (B, FI, FL, G, GB, IS, MS, N, P)
Dragon Valves, Inc., Norwalk, CA (D, EF, G, GB, IM, M, N, P, PG, Q, SO)
Framatome Inc., (North American Headquarters), Lynchburg, VA (B, BF, FM, G, GB, MS, SO)
KSB, Inc., Henrico, VA (B, BF, D, FS, FI, G, GB, IS, MS, M, P, PG, Q)
Mirion Technologies, Inc., Atlanta, GA (D, Q, RS)
Newman Hattersley Ltd., Mississauga, Ontario, Canada (B, BF, G, GB, M)
NuSource LLC, Alexandria, VA (B, G, GB, IM, IS, M, N, PG, PR, RS, SO)
Paragon Energy Solutions, Fort Worth, TX (B, BF, D, FI, G, IM, M, N, PR)
Schutte and Koerting, Trevose, PA (MS, PR, Q, RS)
Technology for Energy Corp., Knoxville, TN (FM)
TRILLIUM Valves USA, Ipswich, MA (BF, FS, FI, G, IS, MS)
Valcor Engineering Corp., (Valcor Nuclear Div.), Springfield, NJ (EF, FS, FI, GB, IM, IS, M, N, P, PR, Q, SO, V)
ValvTechnologies, Inc., Houston, TX (B, FS, FI, MS, Q, RS)
Westinghouse Electric Co. LLC, Cranberry Township, PA (G)

91380 Valves, Pressure Seal

BL Breech Lock
G Gate
GL Globe
PC Piston Check
SC Swing Check
TD Tilting Disk
W Wafer Check Valves

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (BL, G, GL, PC, SC, TD, W)
BNL Industries, Inc., Vernon Rockville, CT (W)
CFM/VR-TESCO, LLC Continental Field Machining, Elgin, IL (G, SC, TD)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (G, GL, PC, SC)
Conval, Inc., Enfield, CT (G, GL, PC)
Curtiss-Wright Nuclear Division, Enertech, Brea, CA (PC)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (G, GL, SC)
Framatome Inc., (North American Headquarters), Lynchburg, VA (G, GL, PC)
KSB, Inc., Henrico, VA (G, GL, PC, SC, TD)
Newman Hattersley Ltd., Mississauga, Ontario, Canada (PC)
NuSource LLC, Alexandria, VA (GL)
Schutte and Koerting, Trevose, PA (SC)
TEiC, Duncan, SC (BL)
TRILLIUM Valves USA, Ipswich, MA (G, GL, SC, W)
ValvTechnologies, Inc., Houston, TX (GL)
Westinghouse Electric Co. LLC, Cranberry Township, PA (SC)

92300 Vessels–*also see Respiratory Protection Equipment*

F Flasks, Water, Valve-Operating
P Pressure
PR Pressure, Reactor

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (P)
Aerofin, (Sub. of Ampco-Pittsburgh Corp.), Lynchburg, VA (P)
AVANTech, LLC, Knoxville, TN (F, P)
AVANTech, LLC, Columbia, SC (F, P)
BWX Technologies, Inc., Lynchburg, VA (P, PR)
Consolidated Power Supply, (Div. of Consolidated Pipe & Supply Co., Inc.), Birmingham, AL (P, PR)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (P)
Dubose National Energy Services, Inc., Clinton, NC (P)

Ellis & Watts Global Industries, Inc., Batavia, OH (P)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (P, PR)
Framatome Inc., (North American Headquarters), Lynchburg, VA (P, PR)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (P)
✦Joseph Oat Corp., Camden, NJ (P, PR)
✦Major Tool & Machine, Inc., Indianapolis, IN (P, PR)
NuSource LLC, Alexandria, VA (P, PR)
✦Petersen Inc., Ogden, UT (P)
PMT Nuclear, Woodridge, IL (P)
✦Precision Custom Components, LLC, York, PA (F, P, PR)
Premier Technology, Inc., Blackfoot, ID (PR)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (P, PR)
Super Radiator Coils, Chaska, MN (P)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (P)
Thermal Engineering International (TEi), Cerritos, CA (P)
Vigor (formerly Oregon Iron Works), Clackamas, OR (P, PR)
Wagstaff Applied Technologies, Spokane, WA (F, P, PR)
Worthington Industries, Columbus, OH (P)

92800 Video Services

I Inspection
PP Plant Photodocumentation
R Remote
U Underwater

Day & Zimmermann, Philadelphia, PA (I, PP, R, U)
DimEye Corp., Calabasas, CA (I, PP, R, U)
Framatome Inc., (North American Headquarters), Lynchburg, VA (I, R, U)
InterTest, Inc., Columbia, NJ (I, PP, R, U)
ISEC Monitoring Systems, Helsingborg, Sweden (I, PP, R)
Lenox Instrument Co., Inc., Trevose, PA (R, U)
Master-Lee Engineered Products Inc., Latrobe, PA (U)
Mirion Technologies, Inc., Atlanta, GA (R, U)
Radium Inc., Waynesboro, VA (I, PP, R, U)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (I, R, U)
Sidus Solutions LLC, San Diego, CA (I, R, U)
TECHWAY, Villebon sur Yvette, France (I, U)
✦Thermo Scientific - CIDTEC Cameras & Imagers, (Part of Thermo Fisher Scientific), Liverpool, NY (I, R, U)
✦Underwater Construction Corp., Essex, CT (R, U)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (I, PP, R, U)
Westinghouse Electric Co. LLC, Cranberry Township, PA (I, R, U)

93040 Waste Management Services–
also see Analysis; Health Physics Services

DM Demineralization
DW Dewatering, Nonradioactive
DR Dewatering, Radioactive
DL Disposal (Low-Level)
ER Environmental Remediation
FP Fuel Pool Services
I Incineration
IL Intermediate-Level
LC Lead Contamination
LW Liquid Waste (High Level & Low Level)
MW Mixed Waste Analysis & Processing
MD Mixed Waste Disposal/Treatment
MS Mixed Waste Solvent Disposal
MO Molten Salt Oxidizers
M Monitoring
NR Non-Radioactive
OF Off-Site (Fixed Base)
ON On-Site
P Packaging/Repackaging
LL Radioactive, Low-Level
HL Radioactive, High-Level
RD Resin Destruction
RP Resin Pyrolysis
RR Resin Regeneration
RC Resource Recovery
SM Scrap Melting
SS Sealed Source Decommissioning
S Solidification
SR Survey & Release
T Transuranic (TRU)
UT Uranium Mill Tailings Reclamation
V Vitrification
VR Volume Reduction
WC Waste Characterization
WS Waste Sampling
WD Wood Decontamination

Accelerated Decommissioning Partners - ADP, Dallas, TX (P, LL, HL)
Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (DL, IL, M, OF, P, HL, RC, SS, SR, VR, WC)
AMEASOL - American Measurement Solutions LLC, Santa Fe, NM (MW, M, WC)
✦American DND Inc., Grand Island, NY (DL, ER, FP, LC, NR, P, SM, VR)
American Integrated Services, Inc., Anaheim, CA (ER, LC, NR)
Attenuation Environmental Co., Seattle, WA (ER, MW, WC)
Augean plc, Wetherby, United Kingdom (DL, NR, LL)
AVANTech, LLC, Knoxville, TN (DM, DW, DR, DL, ER, FP, LW, MW, MD, M, OF, LL, HL, RD, RP, RR, S, VR)
AVANTech, LLC, Columbia, SC (DM, DW, DR, DL, ER, FP, LW, MW, MD, M, OF, LL, HL, RD, RP, RR, S, VR)
BHI Energy, Weymouth, MA (ER, FP, MW, M, P, RC, SR, T, VR, WC, WD)
Burns & McDonnell, Kansas City, MO (ER, M, NR, ON, LL, SR)
BWX Technologies, Inc., Lynchburg, VA (MW, MD, P, LL, HL)
Cabrera Services Inc., East Hartford, CT (DL, ER, MW, MD, M, OF, ON, P, LL, HL, SR, T, V, WC)
Campoverde srl, Milano, Italy (DL, ER, I, IL, LW, MW, LL, HL, RD, V, VR, WC)
Chase Environmental Group, Inc., Troy, IL (DL, ER, M, P, LL, SS, SR, VR, WC, WS, WD)
Chesapeake Nuclear Services, Inc., Annapolis, MD (SR, WC)
CS-2 Inc., Grand Island, NY (DL, NR, SM, WC)
Curie Environmental Services, Albuquerque, NM (DL, LC, MW, MD, MS, NR, OF, ON, P, LL, RC, SS, SR, WC, WS)
Day & Zimmermann, Philadelphia, PA (DW, DR, DL, LL, HL, SR, WC)
Decidia Research & Consulting, Sabadell, Barcelona, Spain (ER)
Deep Isolation, Berkeley, CA (IL, MD, OF, ON, P, HL, T)
The Delphi Groupe, Inc., Austin, TX (I, IL, M, NR, ON, P, HL, S, VR)
Dominion Engineering, Inc., Reston, VA (DR, LW)
DW James Consulting, North Oaks, MN (WC)
Encorus Group, (dba RJR Engineering, P.C.), Springville, NY (ER, FP)
✦EnergySolutions LLC, Salt Lake City, UT (DW, DR, DL, ER, FP, I, LC, MW, MD, MS, P, LL, HL, RC, SM, SS, S, SR, T, V, VR, WC)

See advertisement on page 57

✦Energy, Technology and Environmental Business Association, Oak Ridge, TN (ER, WC)
Environmental Alternatives, Inc., Swanzey, NH (DR, ER, S, SR, VR, WC, WD)
Fluor, Arlington, VA (ER, T, UT, WC)
Foss Therapy Services, Inc., North Hollywood, CA (DL, ON, P, LL, HL)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (DM, DW, ER, LC, NR)
The GEL Group, Inc., (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.), Charleston, SC (ER, M, WC)
Geovariances, Avon, France (SR, WC)
GNS Gesellschaft fur Nuklear-Service mbH, Essen, Germany (LL, HL)
Thomas Gray & Associates, Inc., (Owner of Environmental Mgmt. & Controls, Inc.), Orange, CA (DL, MS, NR, P, SS, S, VR)
✦Holtec International, Camden, NJ (DL, ER, FP, ON, P, VR)
✦I.C.E. Service Group, Inc., Moon Township, PA (DL, ER, I, IL, LC, MW, MD, NR, OF, ON, P, LL, S, UT, VR, WC, WS, WD)
ISEC Monitoring Systems, Helsingborg, Sweden (M)
ISO-PACIFIC Remediation Technologies, Inc., Richland, WA (DR, DL)
Kinectrics Inc., Toronto, Ontario, Canada (ER, IL, MW, MD, M, OF, ON, P, LL, HL, WC, WS)
KUKA Systems UK Ltd, West Midlands, United Kingdom (MW, P, LL, VR, WC)
Lancs Industries, Albuquerque, NM (T)
LND, Inc., Oceanside, NY (DR, DL, IL, MW, M, HL, UT, WC)
Lucideon, Durham, NC (LL, S)
Matom Ltd., North Wales, United Kingdom (ER, IL, MW, MD, MO, M, NR, LL, HL, RD, RP, RR, WC)
Mirion Technologies, Inc., Atlanta, GA (M)
National Technical Systems (NTS), (Nuclear Engineering & Test Services), Huntsville, AL (M)
Navarro Research and Engineering, Inc., Oak Ridge, TN (DW, DR, DL, ER, IL, LC, LW, MD, M, NR, P, LL, HL, SR, T, UT, VR, WC, WS)
New Millennium Nuclear Technologies International, Lakewood, CO (ER, WC, WS)
NV5/Dade Moeller, Richland, WA (ER, NR, LL, SR, WC)
Onet Technologies, (Sub. of Onet SA Marseille-France), Marseille, France (ER, ON, VR, WC)
Orano Decommissioning Services, Hudson, MA (P, LL, HL)
✦Orano Federal Services, Charlotte, NC (DR, DL, ER, FP, LW, P, LL, HL, T, V, VR, WC, WS)
Orano TN, Columbia, MD (FP, OF, ON, P, LL, HL)
✦Perma-Fix Environmental Services, Inc., Oak Ridge, TN (DL, ER, I, IL, LC, LW, MW, MD, MS, M, OF, ON, P, LL, HL, RD, S, SR, T, VR, WC, WS)

See advertisement on pages 12-13

Perma-Fix Environmental Services Inc., (Perma-Fix Northwest Richland) (Wholly Owned Sub. of Perma-Fix Environmental Services, Inc.), Richland, WA (DR, RC, SR)
Perma-Fix Environmental Services Inc., (Perma-Fix of Florida) (A Wholly Owned Sub. of Perma-Fix Environmental Services, Inc.), Gainesville, FL (RC)
Porvair Filtration Group Inc., Ashland, VA (DM)
Promation Nuclear, Oakville, Ontario, Canada (DL, ER, IL, M, NR, OF, ON, P, LL, HL, VR, WC)
PTP Spent Fuel Services, LLC, Grand Island, NY (FP, LL, HL)
Radiac Research Corp., Brooklyn, NY (DL, LW, MD, MS, ON, HL)
Radiation Safety & Control Services, Inc., Seabrook, NH (DL, MD, P, LL, HL, SR, WC)
Radiological Solutions Inc., Rockdale, IL (RR, WS)
✦Reef Industries, Inc., Houston, TX (LL)
Rolls-Royce Civil Nuclear, Warrington, United Kingdom (P)
Rolls-Royce Civil Nuclear SAS, Meylan, France (M)
Rolls-Royce Nuclear I&C, Pittsburgh, PA (M)
RSO, Inc./Radiation Service Organization, Laurel, MD (DL, ER, MD, M, P, LL, SS, SR, VR, WS)
J. L. Shepherd & Assoc., San Fernando, CA (SS)
Sidus Solutions LLC, San Diego, CA (M)
Siempelkamp NIS, Alzenau, Germany (MW, MD, P, VR, WC)
Southwest Research Institute, San Antonio, TX (SS, WC, WS)

Studsvik, Inc., Atlanta, GA (DW, DR, IL, LW, MW, MD, LL, RD, RP, T, VR)
✦Teledyne Brown Engineering, Inc., Huntsville, AL (WC)
3 Bears Technical Services, LLC, Hixson, TN (T, WC)
Transco Products Inc., Streator, IL (M)
✦Underwater Construction Corp., Essex, CT (FP)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (DM, DR, FP, VR)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (DL, LC, VR, WD)
Warrington, Inc., Pflugerville, TX (LC)
Waste Control Specialists LLC, Andrews, TX (DR, DL, LC, MW, MD, NR, OF, P, LL, SS, S, T, UT)
WaterWorks America, Inc., Independence, OH (DW, DR, ER, LW, S)
Westinghouse Electric Co. LLC, Cranberry Township, PA (DM, DW, DR, DL, ER, FP, IL, MW, MD, MS, M, NR, OF, ON, P, LL, HL, RD, RP, RR, RC, SM, SS, S, SR, T, UT, VR, WC)
✦WMG, Inc., Peekskill, NY (FP, IL, LL, WC)
See advertisement on Cover 3
Wood, (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group), Grand Junction, CO (ER, SR, UT, VR, WC)

93900 Welding Services–*also see Diving Services*

A Arc
AT Automatic Tube & Pipe
C Canister
DB Diffusion Bonding
EM Electromagnetic
EB Electron Beam
EX Explosive
LB Laser Beam
P Plasma
RM Remote
S Stud
UM Underwater, Manual
UR Underwater, Remote
WO Weld Overlays
WC Weldment Cleaning

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (A, AT, DB, EM, P, RM, S, WO, WC)
Alaron Nuclear Services, (Veolia Nuclear Solutions Federal Services - Alaron), Wampum, PA (A)
AVANTech, LLC, Knoxville, TN (A, AT, C, UM)
AVANTech, LLC, Columbia, SC (A, AT, C, UM)
BHI Energy, Weymouth, MA (A, WO)
Day & Zimmermann, Philadelphia, PA (A, AT, WO)
Dubose National Energy Services, Inc., Clinton, NC (A, C, S, WO)
Energy and Process Corp., (A Ferguson Sub.), Tucker, GA (WO)
E.S. Fox Limited, Niagara Falls, Ontario, Canada (A, AT)
Framatome Inc., (North American Headquarters), Lynchburg, VA (A, AT, EM, EB, EX, LB, P, RM, S, UR, WO, WC)
Fuel Tank Maintenance Co., LLC, Cookeville, TN (A, AT, C, DB, EM, EB, EX, P, S, WO, WC)
FuseRing.com, London, Ontario, Canada (AT)
✦Joseph Oat Corp., Camden, NJ (C)
Liburdi Automation Inc., Dundas, Ontario, Canada (A, AT, P, RM, WO)
✦Major Tool & Machine, Inc., Indianapolis, IN (A, C, LB, P, S, WO)
PAR Systems, LLC, Shoreview, MN (RM)
PMT Nuclear, Woodridge, IL (A, S, WO)
✦Precision Custom Components, LLC, York, PA (A, P, RM, S, WO)
Premier Technology, Inc., Blackfoot, ID (A, AT, C, S, WO)
PROTEM USA, Evergreen, CO (AT, RM, S, UR)
Schulz Electric, Timken Power Systems, New Haven, CT (A)
SKODA JS a.s., Plzen, Bolevec, Czech Republic (A, EM, EB, LB, P)
Underwater Engineering Services, Inc., (Nuclear Services Div.), Fort Pierce, FL (P, UM, UR)
Unified Engineering, Hamilton, Ontario, Canada (A, P)
Wagstaff Applied Technologies, Spokane, WA (A, AT, S, WO, WC)
Westinghouse Electric Co. LLC, Cranberry Township, PA (A, AT, P, RM, S, UM, UR, WO)

95750 Windows, Radiation-Shielding–*also see Maintenance & Repair Services; Shielding Materials*

LG Lead Glass
LP Lead Plastics

Dufrane Nuclear Shielding Inc., Winsted, CT (LG, LP)
Hot Cell Services Corp., Kent, WA (LG)
✦MarShield Radiation Shielding, (Div. of Mars Metal Co.), Burlington, Ontario, Canada (LG, LP)
Premier Technology, Inc., Blackfoot, ID (LG)

95850 Wipers, Wiping Cloths–*also see Health Physics Equipment & Supplies*

C Cotton
CR Clean Room Laundered
D Disposable, Soluble
I Industrial
LF Lint-Free
OT Oil-Treated Dusting
T Tacky

Coastal Network, Inc., Charlottesville, VA (C, OT, T)
Frham Safety Products, Inc., Nashville, TN (C, D, I, LF)
JSM Protective, Inc., Vero Beach, FL (C, CR, I, LF, T)
Mohawk Safety, Manchester, CT (I, LF)
Protective Plastics, Inc., Greenville, SC (LF, T)
✦UniTech Services Group, Inc., (Div. of UniFirst Corp.), Longmeadow, MA (C, CR, D, I, LF, T)

95900 Wire–*also see Cable*

CG Commercial Grade Dedication
IS Insulated, Signal
SW Insulated, Switchboard
IT Insulated, Thermocouple
M Magnet
MH Magnet, High-Temperature
MS Metal-Shielded
NM Nickel, Monel & Nickel-Chromium
RF Refractory
RS Resistance
SP Spring
SU Superconducting
T Thermocouple

C.J. Enterprises, (Div. of C.J. Instruments, Inc.), Tarzana, CA (IS, M, MH)
Curtiss-Wright Nuclear Division, QualTech NP, Cincinnati, OH (IS, SW, IT)
Mirion Technologies, Inc., Atlanta, GA (MS, SU, T)
Schulz Electric, Timken Power Systems, New Haven, CT (M)

96200 Work Platforms

C Cask Servicing
M Mobile
S Stationary

AECON-WACHS, (U.S. Div. of Aecon Nuclear), Jackson, SC (C)
Curtiss-Wright Nuclear Division, Scientech, Idaho Falls, ID (C)
Dubose National Energy Services, Inc., Clinton, NC (C, M, S)
Dufrane Nuclear Shielding Inc., Winsted, CT (C, M, S)
Framatome Inc., (North American Headquarters), Lynchburg, VA (M, S)
NovaTech, Lynchburg, VA (C, S)
✦Petersen Inc., Ogden, UT (S)
Plant Decommissioning, Lake Villa, IL (C, M, S)

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—Lawrence E. Boing, *Manager, D&D Special Projects,* Argonne National Laboratory

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This section lists in alphabetical order the companies represented in Section I of the Buyers Guide, "Products, Materials & Services Directory." Each listing includes the supplier's location, sales contact (name), telephone numbers, N Stamp information, and code numbers corresponding to the categories under which each company is listed. When provided by the company, email and/or website addresses are also included. An asterisk (*) appearing at the end of the listing indicates that a full-line product, materials, and/or services catalog is available from the supplier. Those suppliers who have an advertisement in *Radwaste Solutions* Buyers Guide 2021 are highlighted in yellow. The "Directory of Suppliers" is divided into two parts: Part 1 lists companies located in the United States; Part 2, companies in other countries (page 144).

Part I—Companies located in the United States

Accelerated Decommissioning Partners - ADP
Dallas, TX | www.adpnuclear.com/
Curtis Roberts | 202/374-8766
curtis.roberts@orano.group
Codes: 20300, 68000, 87000, 93040

Acromag Inc.
Wixom, MI | www.acromag.com
Karen Haldenwanger | 248/295-0866
khaldenwanger@acromag.com
Stamps: AS9100, ISO9001
Codes: 03200, 12900, 19700*

Adam Brown Consulting, Inc.
Cary, IL
Adam KP Brown | 847/287-2616 | akpbrown@aol.com
Codes: 14000, 40900, 47400, 75190

Advanced Consulting Group, Inc.
Chicago, IL
Tom Litka | 773/481-9500 | advcnsgrp@aol.com
Codes: 03800, 14000, 20300, 72300, 79360, 86300

Advanced Nuclear LLC
East Petersburg, PA | www.advancednuclear.com
James Petrides | 317/947-8167 | 800/487-7255
jpetrides@irexcorp.com
Kevin Fenimore | 706/691-6662 | 800/487-7255
kfenimore@irexcorp.com
Codes: 06790, 11400, 13850, 41200, 74350, 77750

AECON-WACHS (U.S. Div. of Aecon Nuclear)
Jackson, SC | www.aecon-wachs.com
Daniel Kiernan | 704/214-9865
dkiernan@aecon.com
Stamps: 10CFR50, App. B Program, R; ASME, PP, S & U Certification. ASME N, NS, NPT, NA
Codes: 13700, 14300, 26900, 27450, 36000, 59800, 59850, 75700, 86130, 90320, 90600, 90800, 91000, 91380, 92300, 93900, 96200

Aerofin (Sub. of Ampco-Pittsburgh Corp.)
Lynchburg, VA | www.aerofin.com
Dan Posid | 434/582-6220 | 800/237-6346
dposid@aerofin.com
Stamps: N, NPT, NS, S; Classes 2, 3, U, PP, R, Certification by ISO 9001:2000
Codes: 83150, 92300*

AeroGo, Inc.
Seattle, WA | www.aerogo.com
Barb Kiliz | 206/575-3344 | 800/426-4757
info@aerogo.com
Stamps: ASME member; ISO 9001:2015; CE compliant
Codes: 68000

Alaron Nuclear Services (Veolia Nuclear Solutions Federal Services - Alaron)
Wampum, PA | www.nuclearsolutions.veolia.com
David Garber | 724/535-5777 x224
dave.garber@alaronnuclear.com
Codes: 11400, 14300, 20300, 20350, 25600, 26230, 68000, 68950, 84600, 93040, 93900*

Alison Control Inc.
Fairfield, NJ | www.alisoncontrol.com
Gene E. Benzenberg | 973/575-7100
alisoncontrol@gmail.com
Codes: 03200, 91260*

Allied Power
Baton Rouge, LA | alliedpwr.com
Ron McCall | 225/412-6455 | ron@alliedpwr.com
Codes: 47400

Alpha Spectra, Inc.
Grand Junction, CO | www.alphaspectra.com
Frank Wilkinson III | 970/243-4477 | 800/231-2545
fjwxtals@alphaspectra.com
Codes: 17950, 21270, 37130, 55040, 55060

AMEASOL - American Measurement Solutions LLC
Santa Fe, NM | www.ameasol.com
Tony Marlow | 505/699-8923
t.marlow@ameasol.com
Codes: 03800, 04000, 12800, 14000, 17950, 20300, 25250, 26080, 26230, 26970, 30500, 40900, 41015, 44000, 68000, 72300, 73620, 75850, 79360, 84600, 86130, 86300, 93040

American Crane & Equipment Corp.
Douglassville, PA | www.americancrane.com
610/385-6061 | 877/877-6778
info@americancrane.com
Stamps: NQA-1 Compliant; 10CFR50, Appendix B Compliant.
Codes: 14000, 18590, 18600, 40900, 68000, 72300, 86300

American DND Inc.
See advertisement on page 5
Grand Island, NY | www.americandnd.com
Bill Schaab | 716/699-5515 | 866/699-5515
adnd@americandnd.com
Codes: 06790, 13050, 14000, 18600, 20300, 20350, 25400, 26230, 79360, 93040*

American Integrated Services, Inc.
Anaheim, CA | www.americanintegrated.com
Joe Reilly | 310/935-8736 | 888/423-6060
jreilly@americanintegrated.com
Codes: 20300, 20350, 20700, 93040

Analysis and Measurement Services Corp. (AMS) (Including CHAR Services)
Knoxville, TN | www.ams-corp.com
Darrell Mitchell | 865/691-1756
darrell@ams-corp.com
Ryan O'Hagan | 865/691-1756 | ryan@ams-corp.com
Codes: 03800, 47400, 56600, 84150, 84600, 86300

The American Society of Mechanical Engineers issues Certificates of Authorization for use of Code Symbol Stamps (e.g., N, NPT, etc.) to qualified manufacturers and assemblers who intend to construct items in accordance with the requirements of the ASME Boiler and Pressure Vessel Code. Descriptions of the applicable Code Symbol Stamps are included in Sections I, III-Subsection NA, IV, VIII-Division 1, VIII-Division 2, and X, together with the requirements applicable to qualified manufacturers and assemblers.

Anamet (a Div. of Acuren Inspection, Inc.)
Hayward, CA | www.anametinc.com
Kenneth R. Pytlewski | 510/887-8811 | 800/377-7768
ken@anametinc.com
Dilip Bhandarkar | 510/887-8811 | 800/377-7768
dilip@anametinc.com
Stamps: Nuclear Industry Assessment Committee Approved (NIAC), ISO 17025:2005 American Association for Laboratory Accreditation (A2LA).
Codes: 03800, 14000, 40900, 84600

F.N. Anderson & Assoc.
Forest, VA | www.fnaai.com
Floyd N. Anderson | 434/258-3380
andersonfn@aol.com
Codes: 03800, 14000, 14300, 25400, 77800, 86300

Anvil International, LLC
North Kingstown, RI | www.anvilintl.com
Grant Nelson | 207/985-7550 | gnelson@anvilintl.com
Stamps: ASME NPT & NS, NQA-1, ISO 9001:2015
Codes: 03800, 14000, 60100*

Applied Analysis Corp.
Reading, PA | www.applied-analysis.com
Juan Cajigas | 610/775-0272
jmcajigas@applied-analysis.com
Stamps: Nuclear Quality Assurance Program, 10CFR50 App.B, 10CFR21, ANSI N45.2, and ASME NQA-1
Codes: 03800, 12800, 14000, 25400, 37200, 40900, 77750, 86300

Applied Science Professionals, LLC (ASP-LLC)
Salt Lake City, UT | www.asp-llc.com
Gary M. Sandquist | 801/209-9681 | gms@asp-llc.com
Stamps: Certified Health Physicist (ABHP), Certified Quality Auditor (ASQ), PE in Nuclear and Mechanical Engineering, SE in Structural Engineering
Codes: 03800, 67380, 86300

ARES Security Corp.
Vienna, VA | aressecuritycorp.com/
Jim Raines | 630/956-0519
jraines@aressecuritycorp.com
Codes: 12800, 14000, 25300, 40900, 47600, 55040, 67380, 72300, 73620, 75600, 75850, 86300, 86500

Argonne National Laboratory (Decommissioning Training), (EOF Div.)
See advertisement on page 94
Argonne, IL | www.dd.anl.gov/ddtraining/
Larry Boing | 630/252-6729 | lboing@anl.gov
Codes: 20300, 86300

Arkema Inc. (formerly ATOFINA Chemicals, Inc.)
King of Prussia, PA | www.arkema-americas.com
610/205-7000 | 800/225-7788
arkema.usph-general@arkema-americas.com
Codes: 20350, 27450

Artisan Industries Inc.
Stoughton, MA | www.artisanind.com
Perry Alasti | 781/893-6800 x239
palasti@artisanind.com
Stamps: U, U2, R, NPT
Codes: 03000, 20300, 26230, 27450, 68000

Askew Power Generation
Santa Fe Springs, CA | www.askewpowergen.com
Chad Stephens | 251/581-3855
cstephens@askewpowergen.com
Stamps: 10CFR50 App. B; 10CFR Part 21; NQA-1 2008 Edition, 2009 Addenda NCA-3800; ASME Sections II and III; ANSI/ASME N45.2.23; NIAC Audited
Codes: 47400

ATS Industrial Automation, Inc. - Nuclear (USA) (ATS Ohio, Inc.)
Lewis Center, OH | atsautomation.com/nuclear
Vito Bagdonavicius | 609/864-9662
vbagdonavicius@atsautomation.com
Stamps: Certifications for Ohio, US facilities: ISO-9001:2015; Certifications for Cambridge, Canada facilities: ASME NQA-1; 10CFR50 App. B; 10CFR21 Program; CSA N285.0; CSA N286; CSA N299; CSA B51; ASME B31.1; ASME B31.3; ISO-9001:2015; ISO: 13485:2016
Codes: 10780, 12800, 14000, 20300, 30500, 40900, 47400, 47600, 59850, 68000, 68950, 72300, 73620, 79360, 86130

Attention IT, Inc.
See advertisement on page 85
Knoxville, TN | www.attentionit.com
Jeanice Pratt | 865/769-8888 x400
jeanice@attentionit.com
Codes: 03800, 06950, 12800, 14000

Attenuation Environmental Co.
Seattle, WA | www.attenuation.us.com
Doris Minor | 206/783-3208
doris@attenuation.us.com
Codes: 03800, 14000, 37200, 93040

The Austin Company
Cleveland, OH | www.theaustin.com
Eric Bockmuller | 440/544-2663
eric.bockmuller@theaustin.com
Codes: 12800, 13850, 14000

Automation Products, Inc. (Dynatrol® Div.)
Houston, TX | www.dynatrolusa.com
Factory Sales Dept. | 713/869-0361 | 800/231-2062
sales@dynatrolusa.com
Codes: 04000, 25000, 40050, 54750*

AVANTech, LLC
Knoxville, TN | www.avantechllc.com
Larry Beets | 865/539-9000
lbeets@avantechinc.com
Stamps: ASME U Code Stamp, National Board of Boiler and Pressure Vessel Inspectors R and NB, UL Approved, NQA-1
Codes: 04000, 08800, 09950, 10780, 12800, 12900, 13600, 14000, 14300, 19700, 20300, 22410, 22700, 24170, 25250, 25400, 25600, 26240, 27180, 27450, 41700, 47400, 53950, 54750, 55040, 59800, 63400, 64750, 68000, 73620, 74150, 75850, 77800, 79370, 83150, 83600, 84600, 86300, 87000, 91260, 92300, 93040, 93900

AVANTech, LLC
Columbia, SC | www.avantechllc.com
Jim Braun | 803/407-7171 | jbraun@avantechinc.com
Gary Benda | 803/317-1116
gbenda@avantechinc.com
Stamps: ASME U Code Stamp, National Board of Boiler and Pressure Vessel Inspectors R and NB, UL Approved, NQA-1
Codes: 04000, 08800, 09950, 10780, 12800, 12900, 13600, 14000, 14300, 19700, 20300, 22410, 22700, 24170, 25250, 25400, 25600, 26240, 27180, 27450, 41700, 47400, 53950, 54750, 55040, 59800, 63400, 64750, 68000, 73620, 74150, 75850, 77800, 79370, 83150, 83600, 84600, 86300, 87000, 91260, 92300, 93040, 93900

AZIsotopes
Bunker Hill, IN
Clyde Jupiter | 801/381-7949
cjupiter@azisocorp.com
W. Brandt Brooksby | 503/753-9100
bbrooksby@azisocorp.com
Codes: 68950

Banda Group International, LLC
See advertisement on page 34
Chandler, AZ | www.bandagroupintl.com
Sarah Bigger | 208/340-2322
sarahb@bandagroupintl.com
Codes: 12800, 25400, 26100

Barge Design Solutions
Nashville, TN | www.bargedesign.com/
Carrie Stokes | 615/254-1500
Codes: 13850

Barnhart Nuclear Services
Fairhope, AL | www.barnhartcrane.com
Jim Faux | 901/233-3804 | 800/587-3249
jfaux@barnhartcrane.com
Codes: 13850, 14000, 18600, 20300, 26240, 47400, 73570, 81680, 86260, 87000*

Basic PSA (Anvil International, LLC)
Johnstown, PA | www.anvilintl.com/services/field-services-support-services
Grant Nelson | 207/251-6004
gnelson@anvilintl.com
Stamps: ASME NS - Class 1, 2, 3 & MC fabrication without design responsibility and with design responsibility for supports and as a Material Organization supplying ferrous & nonferrous material. ASME NPT - Class 1, 2, 3 & MC fabrication with design responsibility and fabrication with design responsibility for Class 1, 2, 3 & MC supports (supports limited to the 1998 edition, 1998 addenda and earlier editions and addenda of the Code) and as a Material Organization supplying ferrous material.
Codes: 40900, 84600

BAUER Equipment America
Conroe, TX | bauer-equipment.com/en/
713/691-3000 | info@bauer-equipment.com
Codes: 26230, 26240

Bechtel Nuclear, Security & Environmental
See advertisement on page 41
Reston, VA | www.bechtel.com
Tim Carraway | 703/429-6275
tacarraw@bechtel.com
Codes: 14000, 20300

Berkeley Nucleonics Corp.
San Rafael, CA | www.berkeleynucleonics.com
Bernadette Jamieson | 415/453-9955 | 800/234-7858
bernadette@berkeleynucleonics.com
Codes: 09800, 37200, 41000

Bevelacqua Resources
Richland, WA | www.bevelacquaresources.com
Dr. Joseph Bevelacqua | 509/628-2240
bevelresou@aol.com
Stamps: American Board of Health Physics Comprehensive Health Physics Certification, Senior Reactor Operator Certification - PWR Certified Radiological Shielding Engineer, Registered Radiation Protection Technologist
Codes: 03800, 12800, 14000, 17950, 20300, 37200, 86300, 86500*

BHI Energy
Weymouth, MA | www.bhienergy.com
Varesha Mauney | 508/591-1149
800/225-0385 x1149 | marketing@bhienergy.com
Butch Smith | 803/226-0330
butch.smith@bhienergy.com
Codes: 03000, 10780, 11400, 13050, 14000, 20300, 20350, 25250, 25300, 25400, 26100, 26230, 27450, 37130, 37200, 47400, 67380, 74350, 75600, 77750, 86300, 90250, 91260, 93040, 93900*

Bigge Power Constructors (Affl. of Bigge Crane and Rigging Co.)
San Leandro, CA | www.bigge.com
Gedge Knopf | 510/638-8100 | 888/337-BIGGE
gknopf@bigge.com
John Simpson | 510/760-9839 | 888/337-BIGGE
jsimpson@bigge.com
Codes: 13850, 14000, 18600, 20300, 73570, 87000

BIRNS, Inc.
Oxnard, CA | www.birns.com
Eric F. Birns | 805/830-5885 | 888/247-6788
service@birns.com
Laura Powell | 805/830-5869 | 888/247-6788
lpowell@birns.com
Stamps: ISO 9001:2015; Quality System also complies to the requirements of NRC 10CFR50, App. B
Codes: 45550

Black & Veatch
Overland Park, KS | www.bv.com
Mark Gake | 913/458-7909 | gakema@bv.com
Codes: 03800, 12800, 13850, 14000, 20300, 40700, 40900, 47400, 63400, 71190, 77750, 86300

Bluegrass Concrete Cutting, Inc.
Greenville, AL | www.bluegrasscompanies.com
Robert Hulick | 334/382-0200 | 800/320-1462
bhulick@concretecutters.com
Stamps: HubZone Certified Small Business; Self Certified Small Business
Codes: 13850, 20300, 20700

BNL Industries, Inc.
Vernon Rockville, CT | www.bnl.com
Christopher Bain | 860/870-6222
christopher.bain@bnl.com
Stamps: N, NPT, Classes 1, 2, 3.
Codes: 90330, 90600, 91260, 91380

Boston Government Services, LLC (BGS)
Oak Ridge, TN | www.bgs-llc.com
Karen Harris | 865/272-8400 | 865/730-7353
kharris@bgs-llc.com
Codes: 03800, 12800, 13850, 14000, 20300, 25400, 40900, 68000, 71190, 75600, 86300, 86500

Brokk Inc.
See advertisement on page 7
Santa Fe, NM | www.brokkinc.com
Tony Marlow | 505/466-3614 | 800/621-7856
tony@brokkinc.com
Stamps: Certification by ISO 9001.
Codes: 13050, 20300, 20350, 26230, 59850, 68000, 72300, 73620*

Burns & McDonnell
Kansas City, MO | www.burnsmcd.com/nuclear
Glenn Neises | 816/822-3388
gneises@burnsmcd.com
Stamps: 10CFR50 App. B/NQA-1 QA Program
Codes: 03800, 13850, 14000, 20300, 59800, 59850, 75600, 86300, 93040

BWX Technologies, Inc.
Lynchburg, VA | www.bwxt.com
Dave Ferris | 434/316-7501 | drferris@bwxt.com
Stamps: NQ-A-1. N Stamp NBIC ASME Sec. 11 Services Provider
Codes: 03800, 14000, 20300, 20700, 25600, 37600, 40900, 56600, 77750, 84600, 92300, 93040

Cablelan Nuclear, Inc.
Fort Myers, FL | www.cablelan.com
Jan Pirrong | 508/384-7811 | 800/840-6655
jpirrong@cablelan.com
Codes: 08800

Cabrera Services Inc.
East Hartford, CT | www.cabreraservices.com
Shannan Ryll | 860/569-0095
sryll@cabreraservices.com
Codes: 03800, 09750, 09800, 14000, 20300, 25250, 26080, 26100, 37200, 41000, 44000, 67380, 86300, 93040

Camfil USA
Washington, NC | www.camfil.com
Glen Moore | 252/975-1141
glen.moore@camfil.com
Stamps: ASME NQA-1, ASME AG-1, ASME Section IX
Codes: 26230, 36000, 91260

CBS Nuclear Services, Inc.
Matthews, NC | www.cbsnuclear.com
Scott Peterson | 704/882-1875
speterson@cbsnuclear.com
Codes: 14000, 47400, 84150, 84600

Central Research Laboratories
Red Wing, MN | www.crlsolutions.com
Rob Weber | 651/385-2133 | info@crlsolutions.com
Codes: 20300, 27180, 47600, 68000, 72300*

CeraMem LLC (Sub. of Alsys Group)
Waltham, MA | www.alsys-group.com
Kevin Donahue | 857/504-2250
kevin.donahue@alsys-group.com
Codes: 27450

CFM/VR-TESCO, LLC Continental Field Machining

Elgin, IL | www.globalfield.net
Stephen Mondrowski | 847/501-0224
800/323-1393 | smondrowski@globalfield.net
Stamps: NR, P, PP, S, U & 10CFR50 App. B Program
Codes: 47400, 54750, 59850, 91000, 91260, 91380

Chase Environmental Group, Inc.

Troy, IL
Dustin G. Miller, CHP/RRPT | 314/240-0507
dmiller@chaseenv.com
Codes: 20300, 20350, 20700, 26100, 37200, 55040, 67380, 86300, 87000, 93040

Chesapeake Nuclear Services, Inc.

Annapolis, MD | www.chesnuc.com
J. Stewart Bland | 410/266-9174
jsbland@chesnuc.com
Codes: 12800, 14000, 20300, 25250, 37200, 86300, 93040

CHP Consultants/Counts.Pro

Oak Ridge, TN | www.chpconsultants.com, www.counts.pro
Robert Gunter | 866/766-4833
rjgunter@chpconsultants.com
Stamps: Refurbished radiation detection equipment, Counts.Pro Instrumentation upgrades to log and record survey meter response. Health Physics consulting services.
Codes: 12800, 12900, 14000, 19700, 20000, 26230, 37200, 40700, 47620, 67380, 71190, 75700, 77800, 79700

C.J. Enterprises (Div. of C.J. Instruments, Inc.)

Tarzana, CA
Marshall Cantor | 818/996-4131
cjinstruments@aol.com
Codes: 08800, 41200, 91260, 95900

CM Technologies Corp.

Coraopolis, PA | www.ecadusa.com
Greg Allan | 412/262-0734 | greg.allan@ecadusa.com
Codes: 08800, 09750, 12800, 54750, 84150, 84600, 86300

Coastal Network, Inc.

Charlottesville, VA | www.nuclearsupply.com
Michael O. Moyles | 434/978-1204
coanetinc@aol.com
Codes: 10850, 10900, 14300, 20350, 37130, 47630, 55040, 55060, 73300, 83110, 83210, 90100, 95850*

Coastel Cable Tools, Inc.

East Syracuse, NY | www.coasteltools.com
John F. Lumia | 315/474-4707
john@coasteltools.com
Codes: 08800, 09750, 09800, 12800, 86130

Cobalt Audio Video (A div. of Comtronics)

Lexington, KY | www.cobaltav.com
David Fried | 859/299-9494 | 800/264-6021
david.fried@comtronicsnow.com
Codes: 11650

Cogentus

Washington, DC | www.cogentus.co.uk
Ian Seed | 202/697-9230 | iseed@cogentus.co.uk
Codes: 12800, 14000

Computer Engineering Services, Inc.

Chattanooga, TN | www.ces-chatt.com
Ben Martin | 423/265-0607 | bmartin@ces-chatt.com
Codes: 12800, 14000

Comtronics

Lexington, KY | www.comtronicsnow.com
David Fried | 859/299-9494 | 800/264-6021
david.fried@comtronicsnow.com
Codes: 11650

Confidential Services, Inc.

South Haven, MI
Beth Warsco | 269/637-8451 | 800/798-1834
bwarsco@csish.com
Codes: 75600

Consolidated Power Supply (Div. of Consolidated Pipe & Supply Co., Inc.)

Birmingham, AL | www.consolidatedpower.com
Ray Troxell | 205/655-5515 | 800/264-5515
sales@consolidatedpower.com
Stamps: ASME (MS), QSC 515, Classes 1, 2, 3, MC, NF. ASME N-3341
Codes: 11400, 13700, 14000, 14300, 26900, 27450, 37600, 41200, 56600, 59800, 61570, 90330, 90600, 90800, 91000, 91260, 91380, 92300*

Container Products Corp.

Wilmington, NC | www.c-p-c.net
Katie Fletcher | 910/392-6100 | 800/635-5647
sales@c-p-c.com
Stamps: CE, GOST-R, NQA1, PE
Codes: 10780, 11700, 14000, 14300, 20350, 68000*

Container Technologies Industries, LLC

See advertisement on page 92
Helenwood, TN | www.containertechnologies.com
General | 423/569-2800 | sales@ctifab.com
Codes: 03800, 10780, 13700, 14300, 75700, 83150

Conval, Inc.

Enfield, CT | www.conval.com
Don Bowers | 860/749-0761 | dbowers@conval.com
Stamps: Certification by ISO 9001. ASME N Stamp Section III, Class 1, 2 and 3; NPT Stamp; European PED; Indian IBR
Codes: 90250, 90600, 91000, 91260, 91380*

Corrosion Control Services, Inc. (CCSI Engineered Diaphragm Div.)

Davenport, IA | www.corrosioncontrolservice.com
Ron Frantz | 563/324-9076 | ronfrantz@hotmail.com
Codes: 22430, 40900, 83150

Cortec Corp.

Saint Paul, MN | www.cortecvci.com
Cliff Cracauer | 651/429-1100
productinfo@cortecvci.com
Codes: 11400, 14000, 17650, 47400

Cragg Consulting

Grapevine, TX
Chris Cragg | 682/223-1150 | chriscragg@gmail.com
Codes: 12800, 14000

CS-2 Inc.

Grand Island, NY | www.cscs-i.com
Bill Schaab | 716/699-5515 | 866/699-5515
cs2@cscs-i.com
Codes: 03800, 06790, 14000, 20300, 25400, 40900, 93040*

CTR Technical Services, Inc.

Manitou Springs, CO | www.ctr-tech.com
Charles T. Rombough | 719/685-3805
ctr@ctr-tech.com
Stamps: Certification by 10CFR50, 10CFR21.
Codes: 03800, 12800, 14000, 86300

Curie Environmental Services

Albuquerque, NM | www.curieservices.com
Scott Logan | 505/888-9392
scott.logan@curieservices.com
Codes: 03800, 68950, 93040

Curtiss-Wright EST Group

Hatfield, PA | www.cw-estgroup.com
Fritz Sutor | 215/721-1100 | 800/355-7044
fsutor@curtisswright.com
David Kronen | 267/903-5593 | 800/355-7044
est-sales@curtisswright.com
Stamps: NUPIC Listed; ISO 9001:2015 Registered. ASME PCC-2
Codes: 26230, 47400, 61570, 84600*

Curtiss-Wright Nuclear Division, Anatec

Brea, CA | www.cwnuclear.com
Fred Hall | 320/316-3531 | fhall@curtisswright.com
Codes: 56600, 73620, 84150, 84600, 86300

Curtiss-Wright Nuclear Division, AP Services

Middleburg Heights, OH | www.cwnuclear.com
Mike Sheehan | 724/295-6200
cwnuclear@curtisswright.com
Codes: 14000, 75190, 90280, 90330

Curtiss-Wright Nuclear Division, Enertech

Brea, CA | www.cwnuclear.com

John Knezevic | 714/982-1927
jknezevic@curtisswright.com

Stamps: N, Classes 1, 2, 3 Valves, NPT, Classes 1, 2, 3, Valves & Appurtenances & Component Supports; NV Classes 1, 2, 3; NU; NA.

Codes: 03800, 09800, 14000, 75190, 90600, 90800, 91000, 91380*

Curtiss-Wright Nuclear Division, LMT

Hutchinson, MN | www.cwnuclear.com

Fred Hall | 320/316-3531 | fhall@curtisswright.com

Codes: 56600, 84150, 84600, 86300

Curtiss-Wright Nuclear Division, NETCO

Danbury, CT | www.cwnuclear.com

Scot Leuenroth | 203/448-3310
sleuenroth@curtisswright.com

Codes: 03800, 12800, 14000, 14300, 81680, 84600, 86300

Curtiss-Wright Nuclear Division, Nova

Middleburg Heights, OH | www.cwnuclear.com

Mike Rea | 216/898-8017 | mrea@curtisswright.com

Stamps: 10CFR50 App. B; 10CFR21; ASME NQA-1; ASME Section III Class 1, 2, 3, CS and MC/MO; ANSI N45.2; CSA Z299.1, Z299.4 (Canada); ISO 9001:2008; ISO 17025:2005; EPRI NP-5652, TR-102260 & TR-017218- R1; MIL-I-45208, MIL-STD-45662, MIL-STD-271

Codes: 13700, 14000, 26900, 39650, 47400, 60100, 61570, 64750, 86130*

Curtiss-Wright Nuclear Division, QualTech NP

Cincinnati, OH | www.cwnuclear.com

Darryl Deist | 931/759-4237
ddeist@curtisswright.com

Stamps: ASME N, NA & NPT, Classes 1, 2, 3 & MC.

Codes: 03000, 03800, 06950, 08800, 13400, 14000, 18600, 19450, 21400, 22200, 25000, 26080, 26910, 26970, 27450, 37600, 40050, 40900, 45550, 47400, 56600, 60100, 63400, 75190, 75700, 76400, 83150, 83210, 84600, 86130, 86300, 90600, 90800, 91000, 91380, 92300, 95900*

Curtiss-Wright Nuclear Division, Scientech

Idaho Falls, ID | www.cwnuclear.com

Jenn Sinkiewicz | 714/982-1840
jsinkiewicz@curtisswright.com

Stamps: ASME Stamps/Symbols - CSA and TSSA

Codes: 03180, 03800, 04000, 12800, 12900, 14000, 19700, 26240, 30040, 30500, 40700, 47400, 53950, 54750, 61570, 63400, 66280, 67380, 71190, 72300, 74320, 75190, 75600, 75850, 76400, 77750, 77800, 79360, 81680, 81710, 84600, 86130, 86300, 96200*

Day & Zimmermann

Philadelphia, PA | www.dayzim.com

Joe Bugica | 980/215-4566 | joe.bugica@dayzim.com

Stamps: S, R, PP, VR.

Codes: 10780, 20300, 47400, 56600, 84600, 92800, 93040, 93900

DC Fabricators Inc.

Florence, NJ | www.dcfab.com

Derrick Phillips | 609/499-3000 x225
dphillips@dcfab.com

Christina Domansky | 609/499-3000 x244
cdomansky@dcfab.com

Stamps: ASME Section VIII Division 1 (U), ASME Section III, TEMA Standards

Codes: 03000, 37600

DCS Systems, Inc.

Simsbury, CT

George D. Dooley | 860/651-0218
gddooley@dcssystems.com

Codes: 03800, 14000, 25400, 40900, 86300

Deep Isolation

Berkeley, CA | www.deepisolation.com

415/915-6505 | info@deepisolation.com

Codes: 68000, 93040

Del Mar Avionics (Hydra Set Div.)

Irvine, CA | www.dma.com

Jim Singley | 949/623-1202 | jsingley@dma.com

Stamps: ISO 9001:2015

Codes: 18600

The Delphi Groupe, Inc.

Austin, TX | www.delphigroupe.com

R. D. Gauny | 512/462-1181
rdgauny@delphigroupe.com

Codes: 03800, 14000, 20300, 20350, 25400, 37200, 40900, 71190, 86300, 93040

Deltech Kiln and Furnace Design, LLC

Denver, CO | www.dkfdllc.com

Mary Stevenson | 303/645-3936 | mary@dkfdllc.com

J.J. Stevenson | 303/645-3935 | jj@dkfdllc.com

Stamps: ISO 9001:2015 certified; NQA-1 program under development

Codes: 68000

Desco Mfg. Co., Inc.

Rancho Santa Margarita, CA | www.descomfg.com

Tom Sistrunk | 949/858-7400 | 800/337-2648
tsistrunk@descomfg.com

Codes: 10780, 86130, 90100*

Deytec, Inc.

Ashburn, VA | www.deytecinc.com

Dr. Monideep Dey | 703/729-1687
deytec@frontiernet.net

Codes: 03800, 12800, 14000, 86300, 86500*

DFT Inc.

Exton, PA | www.dft-valves.com

Jeff Kane | 610/363-8903 | 800/206-4013
jkane@dft-valves.com

DFT Sales | 610/363-8903 | 800/206-4013
dft@dft-valves.com

Codes: 90600, 90800*

DimEye Corp.

Calabasas, CA | www.dimeye.com

Arnauld Dumont | 818/225-1626
arnauld@dimeye.com

Codes: 39960, 40900, 92800

Dominion Engineering, Inc.

Reston, VA | www.domeng.com

Dale Vines | 225/305-3428 | dvines@domeng.com

Codes: 03800, 10780, 14000, 20350, 27450, 54750, 68000, 93040

Dragon Valves, Inc.

Norwalk, CA | www.dragonvalves.com

C. R. Bond | 562/921-6605 | 800/966-4007
info@dragonvalves.com

Stamps: NUPIC Audited ASME NQA -1 and 10CFR50 App. B Program. ASME N Stamp Certification still available.

Codes: 90250, 90600, 90800, 91260*

Dubose National Energy Services, Inc.

Clinton, NC | www.dubosenes.com/

Beau Laslo | 910/590-2151
beau.laslo@dubosenes.com

Stamps: ASME NA, ASME NS, ASME NPT, ASME U, NBBI R, AISC, AWS

Codes: 13700, 14300, 26900, 37600, 56600, 59800, 59850, 60100, 61570, 66280, 83150, 92300, 93900, 96200*

Dufrane Nuclear Shielding Inc.

Winsted, CT | www.dufrane.com

Dan Brooks | 860/379-2318 | dbrooks@dufrane.com

Tim Tarbox | 479/886-0345 | tarbox@dufrane.com

Stamps: ISO 9001 (2008) Certification; NQA - 1 Compliant.

Codes: 03800, 09950, 11650, 13050, 13700, 13850, 14000, 14300, 20300, 37130, 37200, 47400, 55490, 68000, 73570, 75700, 77750, 77800, 87000, 95750, 96200*

DW James Consulting
North Oaks, MN | www.dwjames.com
Tom Kalinowski | 651/482-7556
tkalinowski@dwjames.com
Codes: 14000, 20300, 37200, 68000, 86300, 93040

Ebersen, Inc.
Minneapolis, MN
Chidi N. Anunka | 763/572-2661 | eberson@att.net
Codes: 12800, 14000, 87000

Eckert & Ziegler Analytics
Atlanta, GA | www.ezag.com/home/products/isotope_products/isotrak_calibration_sources/
Doreen McBride | 404/352-8677
isotrakusa@ezag.com
Stamps: ISO 17025, 9001 and 17043
Codes: 68950*

ECU Corporation
Cincinnati, OH | www.ecucorp.com
Michael J. Fox | 513/898-9294 | mfox@ecucorp.com
Stamps: UL508A Listed Industrial Panels, ASME AG-1 HVAC Equipment, 10CFR50 App.B QA program
Codes: 03000, 03800, 14000, 19450, 27180, 32250, 37600, 47400, 71500

EFCO USA, Inc.
Charlotte, NC | www.efcousa.com
Christian Mossberg | 704/943-1027 | 800/EFCO-USA
sales@efcousa.com
Codes: 00300, 26230, 37600, 84150, 86300, 90320*

E. H. Wachs
Lincolnshire, IL | www.ehwachs.com
Ron Rohrbacher | 847/537-8800 | 800/323-8185
rrohrbacher@ehwachs.com
Codes: 20300, 59850, 72300, 90100, 90250*

Elcometer Education Institute
Warren, MI | www.elcometeredu.com/
Deb Piatt | 248/650-0500
training@elcometerusa.com
Codes: 86300, 86400, 86500

Elcometer Inc.
Warren, MI | www.elcometerusa.com
Sunny Nietubicz | 248/650-0500 | 800/521-0635
sales@elcometerusa.com
Stamps: Certification by ISO 9001:2015, ISO/IEC 17025:2017
Codes: 03800, 04000, 10850, 10900, 26080, 56600, 84150*

Electric Motor and Contracting Company Inc.
Chesapeake, VA | www.emc-co.com
Thad Redmond | 757/487-2121 | 800/655-1195
thad.redmond@emc-co.com
Codes: 03800, 11400

Electro Static Technology
Mechanic Falls, ME | www.est-aegis.com
Sunshine Spaulding | 207/998-1222 | 866/738-1857
sunshine.spaulding@est-aegis.com
Karen Fowler | 207/998-1226 | 866/738-1857
karen.fowler@est-aegis.com
Codes: 47400, 64700, 75190

Ellis & Watts Global Industries, Inc.
Batavia, OH | www.elliswatts.com
Jacob Bolden | 513/943-3327
jbolden@elliswatts.com
Stamps: ASME B&PV Code Section III, Division 1, Class 2 & 3: N Stamp, NA Stamp, NS Stamp, NPT Stamp; ASME B&PV Code Section VIII, Division 1: U Stamp, UM Stamp; ASME NQA-1; ASME AG-1; IEEE Class 1E; CE Certificate (European Pressure Equipment); CRN Registered (Canada)
Codes: 00400, 03000, 14000, 19450, 27180, 27450, 32250, 37600, 39650, 71500, 77750, 84600, 90250, 92300

Elysium Industries USA
New York, NY | www.elysiumindustries.com
Carl Perez | 646/706-3698 | c.perez@elysium-v.com
Codes: 03800

Empyrean Services
Sewickley, PA | www.empyreanonline.com
Darrell Williams | 412/923-4050
dwilliams@empyreanonline.com
Codes: 14000

Encorus Group (dba RJR Engineering, P.C.)
Springville, NY | www.encorus.com
Kevin Opp | 716/592-3980 | kopp@encorus.com
Stamps: NQA-1
Codes: 20300, 26100, 47600, 53950, 74320, 77750, 86130, 93040

Enercon Services, Inc. (Talisman Div.)
Kennesaw, GA | www.enercon.com
Thomas Magette | 410/353-0427
tmagette@enercon.com
Codes: 03800, 14000, 14300, 20300, 75600, 75850

Energy and Process Corp. (A Ferguson Sub.)
Tucker, GA | www.energyandprocess.com
Mark Capallo | 770/934-3101 | 800/241-9460
mark.capallo@energyandprocess.com
Stamps: QSC-332, MO, Classes 1, 2, 3, MC.
Codes: 13700, 14300, 26900, 56600, 59800, 60100, 61570, 83150, 92300, 93900

Energy Resources International Inc.
Washington, DC | www.energyresources.com
Eileen M. Supko | 703/627-5934
supko@energyresources.com
Codes: 03800, 12800, 14000

EnergySolutions LLC
See advertisement on page 57
Salt Lake City, UT | www.energysolutions.com
Mark Walker | 801/649-2000
mwalker@energysolutions.com
Stamps: ASME NQA-1-Quality Assurance Requirements for Nuclear Facility Applications-2000, ASME AG-1-Code on Nuclear Air and Gas Treatment, ASME Boiler and Pressure Vessel Code, ICBO-Uniform Building Code (UBC)-1997, ASME B31.1-Power Plant Piping, ASME B31.3-Chemical Plant and Petroleum Refinery Piping, AISC Manual of Steel Construction-Allowable Stress Design, ASCE 4-Seismic Analysis of Safety-Related Nuclear Structures and Commentary, ASCE 7-Minimum Design Loads for Building and Other Structures, NFPA 70-National Electric Code (NEC), AWS D1.1-Structural Welding Code-Steel, AWS D1.2-Structural Welding Code- Aluminum, AWS D1.3- Structural Welding Code-Sheet Steel, AWS D1.6-Structural Welding Code-Stainless Steel, WRC 107- Local Stresses in Spherical and Cylindrical shells due to external loadings, WRC 297-Local Stresses in Cylindrical shells due to external loadings.
Codes: 03800, 04000, 09800, 09950, 10780, 10850, 14300, 17950, 20300, 20350, 26230, 27450, 30040, 30500, 37200, 41000, 44000, 68000, 77800, 79360, 86300, 87000, 93040

Energy Steel
Lapeer, MI | www.energysteel.com
Bill Davidson | 949/246-2640
bdavidson@energysteel.com
Stamps: Certifications of Authorization: ASME Section III N, NPT, NA, NS, ASME VIII U/NBIC NR & R, 10CFR50 App. B/NQA-1 N45.2/NCA/W 3800/NCA/WA 4000, Canadian Standard Z-299
Codes: 03800, 13600, 14300, 20300, 37600, 59800, 61570, 75190, 83150*

Energy, Technology and Environmental Business Association
See advertisement on page 151
Oak Ridge, TN | www.eteba.org
Terri Reedy | 865/643-2302 | terri@eteba.org
Codes: 14000, 86300, 93040

Engineered Rigging
Russellville, AR | www.engineeredrigging.com
Christopher Cox | 219/712-4579 | 844/474-4448
ccox@engineeredrigging.com
Codes: 13850, 14000, 18600, 25400, 26230

Engineered Rigging
Valparaiso, IN | www.engineeredrigging.com
Christopher Cox | 844/474-4448
ccox@engineeredrigging.com
Codes: 13850, 14000, 18600, 25400, 26230, 47400, 73570

Engineering Planning and Management, Inc.

Framingham, MA | www.epm-inc.com
Robert Kalantari | 508/532-7128 | 800/437-6462
rbk@epm-inc.com
Codes: 03800, 12800, 14000, 71190, 86300

Environmental Alternatives, Inc.

Swanzey, NH | www.eai-inc.com
Randy Martin | 603/352-3888 | rmartin@eai-inc.com
Codes: 10780, 14000, 20300, 20350, 37130, 68000, 93040

Environmental Restoration Group, Inc.

Albuquerque, NM | www.ergoffice.com
Chuck Farr | 505/298-4224 | chuckfarr@ergoffice.com
Codes: 09800, 14000, 17950, 20300, 25250, 26080, 26100, 26230, 37130, 37200, 55040

ETAP - Operation Technology, Inc.

Irvine, CA | etap.com
Mary J. Beal | 949/900-1000 | sales@etap.com
Stamps: United States Code (U.S.C.) Title 10CFR50, App. B United States Code (U.S.C.) Title 10CFR21; ANSI/ASME N45.2-1977; ASME NQA-1 (Includes Subpart 2.7); ISO 9001:2008 Registered Certification Number 10002889 QM08; ANSI/IEEE Std 730.1-1995 CAN/CSA-Q 396.1.2- 1989; ANSI N45.2.2-1972
Codes: 03800, 12800*

EXCEL Services Corporation

Rockville, MD | www.excelservices.com
Donald R. Hoffman | 301/984-4400
donald.hoffman@excelservices.com
Codes: 03800, 14000, 20300, 25400, 41000, 47400, 75600, 86300*

Exelon PowerLabs

Coatesville, PA | www.exelonpowerlabs.com
Daniel Doran | 610/380-2475
daniel.doran@exeloncorp.com
Stamps: ISO 17025.2020; ANSI/NCSL Z540.3; ANSI N45.2; 10CFR50 App. B; 10CFR21
Codes: 03800, 09750, 09800, 37200, 40050, 41000, 44000, 45550, 84600*

FCI-Fluid Components International LLC

San Marcos, CA | www.fluidcomponents.com/nuclear
Randy Brown | 760/744-6950
fcimarcom@fluidcomponents.com
Stamps: Nuclear Safety Class 1E Supplier Since 1978; EMC and Electrical Safety per USNRC RG 1.180, EN 61000-6-4/2, EN 610101-1; ISO 9001 Certified, NUPIC Approved, HAF 604 Certified; QA in Accordance with 10CFR50 App. B, ANSI N45.2, ASME NQA-1; Item Dedication Program; ASME Section III, Class 1, 2, 3 (N-Stamp) Instruments
Codes: 03200, 09800, 17950, 32250, 40050, 54750*

Five Star Products, Inc.

Shelton, CT | fivestarproducts.com
Crysta Abell | 203/336-7941 | 800/243-2206
abellc@fivestarproducts.com
Codes: 36900, 47400*

F&J SPECIALTY PRODUCTS, INC.

See advertisement on pages 100–101
Ocala, FL | www.fjspecialty.com
Sales Coordinator | 352/680-1177/1178
800/832-5037 | fandj@fjspecialty.com
Codes: 09800, 27450, 55040, 74150*

Fluor

Arlington, VA | www.fluor.com/government
Jody Redeker | 703/387-4845
jody.redeker@fluor.com
Justin Garrison | 864/281-4637
justin.garrison@fluor.com
Stamps: Certification by ISO 9000/9001/9002.
Codes: 03800, 06790, 14000, 20300, 93040

Foss Therapy Services, Inc.

North Hollywood, CA | www.fosstherapyservices.net
Joseph Shepherd | 626/818-3880
ftsinc12@gmail.com
Codes: 20350, 68000, 77800, 93040*

Framatome Inc. (North American Headquarters)

Lynchburg, VA | www.framatome.com
Donna Gaddy-Bowen | 434/832-3702
donna.gaddybowen@framatome.com
Stamps: ASME III N, NPT Stp.; ASME I S Stp.; ASME VIII Div. 1 U Stp.; Nat'l. Brd. Nuclear Cmpnts., Mod/ Repl/Repair NR Stp. & Pressure Retng. Items Repair/ Alter R Stp.; N, NR, NPT, ISO 9001.
Codes: 00400, 03000, 03200, 03800, 04000, 08800, 09730, 09750, 09800, 10780, 11400, 11700, 12800, 12900, 13400, 14000, 14300, 18600, 19700, 20350, 21320, 21400, 22410, 25000, 25250, 25350, 25400, 26100, 26230, 26900, 26970, 27450, 30040, 30500, 32250, 37130, 37200, 37600, 39960, 40050, 40900, 41000, 41700, 45550, 47400, 47600, 53950, 54750, 55040, 55060, 55490, 56600, 58000, 59800, 59850, 61570, 64700, 66280, 68950, 71190, 72300, 73300, 73550, 73620, 74150, 74320, 75190, 75600, 75850, 76400, 77600, 77750, 77800, 81680, 83150, 83600, 84150, 84600, 86130, 86250, 86260, 86300, 86400, 86500, 87000, 90250, 90280, 90320, 90600, 90800, 91000, 91260, 91380, 92300, 92800, 93900, 96200*

Free Form Fibers

Saratoga Springs, NY | fffibers.com/
Jeff Vervlied | 215/768-4076 | jvervlied@fffibers.com
Codes: 00300, 55490, 77800

Frham Safety Products, Inc.

Nashville, TN | www.frhamsafety.com
Fred Nance | 615/254-0841
fnance@frhamsafety.com
Trip McGarity | 803/366-5131 | trip@frhamsafety.com
Codes: 03000, 10780, 10850, 10900, 11400, 11650, 25250, 26080, 26100, 26600, 27450, 36000, 37130, 37160, 68000, 73550, 77800, 79370, 83110, 83210, 95850*

Fronek - Anchor Darling Enterprises, Inc. (Sub. of Piping Technology & Products, Inc.)

Laconia, NH | www.fronekgrp.com
Walter Paszul | 603/528-1931
walter@fronekgrp.com
Stamps: ASME NS, Class 1, 2 3; 10CFR50 App. B; ANSI N45.2
Codes: 60100

Frontier Technology Corp.

Xenia, OH | www.frontier-cf252.com
Treva Janzow | 937/376-5691
t.janzow@frontier-cf252.com
Codes: 14300, 25600, 68950, 77800*

Fuel Tank Maintenance Co., LLC

Cookeville, TN | www.fueltankmaintenance.com
Jerry Hahn | 615/355-5636 | 800/742-2417
jthahnjr@hotmail.com
Stamps: SSPC, QP1, QP2; NACE Level 1, Level 2. 10CFR 50 Appendix B and NQA- 1 Certifications.
Codes: 03800, 06790, 11400, 13050, 14000, 17650, 20300, 20350, 25400, 30500, 40900, 47400, 56600, 75700, 75850, 83150, 84600, 92300, 93040, 93900

Full On Communications

Woodstock, VT | www.fulloncom.com
Nathalie Stepherson | info@fulloncom.com
Codes: 14000

Garney Construction

North Kansas City, MO | www.garney.com
Greg Harris | 678/736-6040 | gharris@garney.com
Codes: 13850

The GEL Group, Inc. (GEL Engineering, LLC), (GEL Laboratories, LLC), (Cape Fear Analytical, Inc.)

Charleston, SC | www.gel.com
Robert Wills | 843/556-8171 | robert.wills@gel.com
Codes: 03800, 04000, 14000, 26100, 37200, 74150, 74320, 86300, 93040

GEL Solutions, LLC (A Member of The GEL Group, Inc.)

Charleston, SC | www.gel-solutions.com
Scott Smith | 843/769-7379 | sts@gel.com
Codes: 03800, 14000, 40900, 56600

Genave Electronics
Rosemount, MN | www.genave.com
Jim Edwards | 952/236-6540 | support@genave.com
Codes: 25300, 40900

General Atomics Electromagnetic Systems
San Diego, CA
www.ga.com/radiation-monitoring-systems
Brandon Brooks | 858/964-6940
brandon.brooks@ga.com
Stamps: ISO9001:015/AS9100:2016
Codes: 03200, 03800, 09750, 09800, 12800, 14000, 17950, 19700, 25000, 26080, 47400, 55040, 55060, 67380, 68950, 74150*

General Magnaplate
Arlington, TX | www.magnaplate.com
Darin Chase | 817/640-1761 | 800/852-3301
info@magnaplate.com
Stamps: Certification by ISO 9001:2015 registered. AS9100 certified
Codes: 14000

Gen IV Nuclear Energy Systems Services
Rockville, MD
www.genivnuclearenergysystems.com
Homi Amirmokri | 301/202-7311
homi@genivnuclearenergysystems.com
Codes: 03800, 14000, 25400

Gilbert Consulting Services, Inc.
Arroyo Grande, CA | www.gcservices.com
Keith Gilbert | 805/481-5105 | keith@gcservices.com
Codes: 25400

Glenair, Inc.
Wallingford, CT | www.glenair.com
Doug Merriman | 203/741-1115
dmerriman@glenair.com
Codes: 13400

Glidewell Specialties Foundry Co.
Calera, AL | www.glidewell-foundry.com
John Hendrix | 205/668-1881 x3011
jhendrix@glidewell-foundry.com
Mark Fields | 937/287-1845
glidewellsales@cinci.rr.com
Stamps: ISO 9000; Bureau Veritas Factory Approval Cert; Lloyd's Register Factory Approval.
Codes: 14300, 77800*

Global Quality Management Advisors
Lynchburg, VA | www.gqmadvisors.com
Paul W. Gladieux | 503/939-4498
paul@gqmadvisors.com
Codes: 14000

GLSEQ, LLC
Huntsville, AL | www.glseq.com
Jim Gleason | 315/664-3771
jim.gleason@glseq.com
Patrick Gleason | 256/369-8857
pat.gleason@glseq.com
Codes: 12900, 14000, 17950, 20000, 21370, 25250, 32250, 55040, 74320, 84150

GoldSim Technology Group
Seattle, WA | www.goldsim.com
Rick Kossik | 425/295-6985 | rkossik@goldsim.com
Codes: 03800, 14000

Graphic Products
Beaverton, OR | www.graphicproducts.com
Christine Torres | 503/469-3076 | 888/326-9244
ctorres@graphicproducts.com
Codes: 37130

Graver Technologies Inc. (A member of The Marmon Group of Companies)
Glasgow, DE | www.gravertech.com
Lois Windham | 713/208-9292 | 800/249-1990
lwindham@gravertech.com
Codes: 27450

Graver Water Systems, LLC
Warren, NJ | www.graver.com
908/516-1400 | 877/GRAVERW | sales@graver.com
Stamps: ISO 9001:2008
Codes: 27450

Thomas Gray & Associates, Inc. (Owner of Environmental Mgmt. & Controls, Inc.)
Orange, CA | www.tgainc.com
Richard E. Gallego | 714/997-8090 | rich@tgainc.com
Codes: 14000, 14300, 86300, 93040

GSE Absolute (Absolute Consulting)
Columbia, MD | www.gses.com/absolute/
Sunny DeMattio | 850/939-8965 | info@gses.com
Billie Jo Parsons | 850/939-8965
billiejo.parsons@gses.com
Codes: 25400

GSE DP (DP Engineering)
Fort Worth, TX | www.gses.com/dp
Sunny DeMattio | 410/970-7800
sunny.demattio@gses.com
Greg Hietpas | 817/710-8470
greg.hietpas@gses.com
Codes: 03800, 13850, 14000

GSE Hyperspring
Columbia, MD | www.gses.com/hyperspring
Sunny DeMattio | 410/970-7800
sunny.demattio@gses.com
Russell E.(Rusty) Dunlap | 410/970-7842
russell.dunlap@gses.com
Codes: 12800, 14000, 25400, 71190, 86300, 86400, 86500

GSE TrueNorth
Montrose, CO
Sunny DeMattio | 410/970-7800
sunny.demattio@gses.com
Gregory Tucker | 970/252-1489
gregory.tucker@gses.com
Codes: 14000

Haley & Aldrich, Inc.
Portland, ME | www.haleyaldrich.com
Nadia Glucksberg | 207/482-4623
nglucksberg@haleyaldrich.com
Codes: 13850

Hayward Tyler
Colchester, VT | www.haywardtyler.com
Jeff Belotti | 802/655-4444 x141
jeffrey.belotti@haywardtyler.com
Stamps: N, NA, NPT, Classes 1, 2 & 3.
Codes: 64700, 64750*

HealthPhysics.com
Amarillo, TX | www.healthphysics.com
Michael Ford | 806/459-9979
michael@healthphysics.com
Codes: 14000, 37200

Health Physics Instruments (Div. of Far West Technology, Inc.)
Goleta, CA | www.fwt.com
John Handloser | 805/964-3615 | info@fwt.com
Deborah Thiele | 805/964-3615 | info@fwt.com
Codes: 09800, 17950, 21270, 37200, 47400, 55040

Heat Exchanger Products Corp. (HEPCO)
Hingham, MA | www.heatexchangerproducts.com
Tracy Hennigan Bonnyman | 781/749-0220
800/472-8484 | hepco@heatexchangerproducts.com
Codes: 10780, 20350, 37600, 47400, 61570, 84150

Hennigan Engineering LLC
Hingham, MA | www.henniganengineering.com
Tracy Hennigan Bonnyman | 781/749-0220
800/472-8484 | thb@henniganengineering.com
Stamps: Certification by SSPC-QP1 and QP2.
Codes: 10780, 11400, 20300, 20350, 37600, 40900, 47400, 56600, 61570, 84600

Hexion Inc.
Columbus, OH | www.hexion.com
Product Information | 614/986-2497 | 888/443-9466
service@hexion.com
Codes: 11400, 14000, 17650

HF Controls Corp. (Sub. of Doosan Heavy Industries & Construction Co., Ltd.)
Carrollton, TX | www.hfcontrols.com
Steve Yang | 214/676-6889 | 866/501-9954
steve.yang@doosan.com
Stamps: 10CFR50 App. B; ISO; NQA-1, KINS; and TUV SIL 3
Codes: 03200, 03800, 09750, 12800, 12900, 13600, 14000, 18600, 19700, 20000, 41000, 54750, 67380, 76400, 86300

High Bridge Assoc. (Meridian Services Group)
Chattnooga, TN | www.hba-inc.com/
Liz Snow | 423/468-4317
Jim O'Connor | 423/468-4317
Codes: 20300*

Highland TEMS, LLC
Marietta, GA | www.highland-temsengineering.com
Ralph Schwartzbeck, P.E. | 404/386-3971
ralph@highland-temsengineering.com
Codes: 14000

Hilman Inc.
Marlboro, NJ | www.hilmanrollers.com
Samantha Reidy | 732/462-6277 | 888/276-5548
sales@hilmanrollers.com
Codes: 47400

HI-Q Environmental Products Co., Inc.
San Diego, CA | www.hi-q.net
Marc A. Held | 858/549-2820 | info@hi-q.net
Stamps: ISO 9001:2015 Certified
Codes: 04000, 09800, 26080, 27450, 37130, 37200, 41000, 55040, 58000, 90100*

Hoffer Flow Controls
Elizabeth City, NC | www.hofferflow.com
Janna Critcher | 252/331-1997 | 800/628-4584
info@hofferflow.com
Codes: 40050

Holtec International
See advertisement on page 115
Camden, NJ | www.holtecinternational.com
Joy Russell | 856/797-0900 x3655
j.russell@holtec.com
Dr. Rick Springman | 856/797-0900 x3716
r.springman@holtec.com
Stamps: ASME Stamps: N, NPT, N3, U, R, NR, NB, NS. ISO 9001:2008
Codes: 03800, 14000, 14300, 30500, 66280, 68000, 81710, 93040*

Hopewell Designs, Inc.
Alpharetta, GA | www.hopewelldesigns.com
Kevin Klem | 770/667-5770
sales@hopewelldesigns.com
Ryan Howell | 770/667-5770
ryan.howell@hopewelldesigns.com
Codes: 00400, 09800, 20300, 37130, 37160, 37200, 55490, 68000, 73300, 77750

Hot Cell Services Corp.
Kent, WA | www.hotcell.com
Zbigniew Tomalik | 253/854-4945 x21
zbigniew.g.tomalik@saint-gobain.com
Stamps: ASME NQA-1
Codes: 77750, 95750*

H3D, Inc.
Ann Arbor, MI | h3dgamma.com
Y. Andy Boucher | 734/661-6416
andy@h3dgamma.com
Codes: 17950, 20300, 25250, 55040

HukariAscendent
Wheat Ridge, CO | www.hukari.com
Ken Hukari | 303/384-9079 | 866/487-7628
ken@hukari.com
Codes: 12800, 13850, 14000, 71190, 86300

Human Resources Consulting
Gallatin, TN | www.yourhrconsultant.com
Gary Kaufman | 615/305-1900
garykaufman@yourhrconsultant.com
Codes: 86300

Huxtable Consulting LLC
Lexington, SC | www.huxtableconsulting.com/
Brian Huxtable | 651/399-0832
brian@huxtableconsulting.com
Codes: 12800

HydroPro Inc.
Bourbon, MO | www.hpro.com
Stephen Waldron | 573/732-3318 | sales@hpro.com
Codes: 17650, 47400, 56600, 59850, 61570, 84150, 84600, 86130

ibeX - Energy Solutions
McLean, VA | www.ibexesi.com
Marketing Department | 772/781-1894
marketing@ibexesi.com
Global Business Desk | 301/986-5811
Codes: 13850, 14000*

I.C.E. Service Group, Inc.
See advertisement on page 95
Moon Township, PA | www.iceservicegroup.com
Dennis Morgan | 412/916-5710
dmorgan@iceservicegroup.com
Stamps: NQA-1
Codes: 09950, 12800, 14000, 14300, 20300, 25250, 25400, 26230, 68000, 87000, 93040*

ILD, Inc.
Baton Rouge, LA | www.ildpower.com
Jack Little | 225/769-2780 x111 | jack@ildpower.com
Codes: 03800, 14000

Imperia Engineering Partners LLC
Bordentown, NJ | www.imperiaep.com
Scot Blodgett | 855/425-8726
scot.blodgett@imperiaep.com
Codes: 03800, 13850, 14000, 20300, 40900, 75600, 84600

InfoSight Corp.
Chillicothe, OH | www.infosight.com
Becky Dolan | 740/642-3600 | 888/642-3600
bdolan@infosight.com
Codes: 06950, 83110, 83120*

In-Place Machining Company, LLC
Batavia, OH | www.inplace.com
Tim Beckman | 513/388-0199
tbeckman@inplace.com
Chad Danz | 513/388-0199 | cdanz@inplace.com
Codes: 13050, 14000, 20300*

Intek, Inc.
Westerville, OH | www.intekflow.com
Tony Bonina | 614/895-0301 | 800/743-6822
tbonina@intekflow.com
Jason Reynolds | 614/895-0301 | 800/743-6822
jreynolds@intekflow.com
Stamps: ISO 9001:2015 Certified
Codes: 03200, 14000, 17950, 37600, 40050, 47400, 54750*

Interdevelopment, Inc.
Falls Church, VA | www.interdevelopment.com
M.K. Luddemann-Faris | 202/508-1459
interdevelopment@starpower.net
Codes: 03800, 14000

InterTest, Inc.
Columbia, NJ | www.intertest.com
Thomas F. Daly | 908/496-8008 | 800/535-3626
bginfo@intertest.com
Codes: 26230, 39960, 84150, 84600, 92800

InVizion LLC
Bala Cynwyd, PA | www.invizionllc.com
Kristy Neckowicz | 484/270-0239
info@invizionllc.com
Codes: 12800

IONEX Research Corp.
Lafayette, CO | www.ionex.us
D. W. Porrey | 303/666-5550 | dporrey@ionex.us
Stamps: QA Program in accordance with NQA-1
Codes: 27450, 32250

ISA Corp.
Salem, OR
Brian Clarke | 503/983-7090
brianclarke@isacorporation.net
Codes: 10850, 10900

ISOFLEX USA
San Francisco, CA | www.isoflex.com
Patrick Hardy | 415/440-4433
888/399-4433(USA/Canada) | iusa@isoflex.com
Peter Svendsen | 415/440-4433
888/399-4433(USA/Canada) | pgs@isoflex.com
Codes: 00400, 03800, 55490

ISO-PACIFIC Remediation Technologies, Inc.
Richland, WA | www.isopacific.net
Lori Dillon | 509/375-0100 | lori.dillon@isopacific.net
Codes: 03200, 03800, 09730, 10780, 12800, 14000, 17950, 18600, 20300, 21370, 22700, 25600, 26230, 30500, 37130, 37200, 39960, 47400, 53950, 56600, 63400, 64700, 66280, 67380, 68950, 71190, 72300, 73300, 74150, 74320, 77750, 79700, 87400, 93040

JNT Technical Services Inc.
Little Ferry, NJ | www.torq-n-seal.com
Glenn Jorgensen | 201/641-2130 | sales@jnt.bz
Stamps: NPT N-2928, Class III: NCA 3800, 10CFR50 App. B/10CFR Part 21.
Codes: 47400, 56600, 61570, 86130

Joseph Oat Corp.
See advertisement on page 9
Camden, NJ | www.josephoat.com
Crystal Harrington | 856/541-2900
c.harrington@josephoat.com
Stamps: N, NPT, NA, Classes 1, 2, 3, MC, U, S; N Classes 1, 2, 3, MC Vessels + Piping Systems. +2, 3 Storage Tanks, NPT Class 1, 2, 3 & MC, NA Class 1, 2, 3 U&S, 10CFR50 Appendix B, 10CFR71 Subpart H, 10CFR72 Subpart G, NQA-1 Program, Certification by ISO 9001.
Codes: 03800, 09950, 13700, 14000, 14300, 27450, 36000, 37600, 40900, 56600, 59800, 68000, 77750, 78700, 83150, 92300, 93900*

JRM Chemical Inc.
Cleveland, OH | www.soilmoist.com
Dave Czehut | 216/475-8488 | 800/962-4010
jrm@en.com
Codes: 79370*

JSM Protective, Inc.
Vero Beach, FL | www.jsmonline.com
Jeannette McLean | 910/619-3141
jmclean@jsmonline.com
Stamps: Woman Owned Small Business; ANS Member; SAM Registered
Codes: 10850, 10900, 26080, 37130, 54750, 55040, 73550, 83110, 83210, 95850

Kinemetrics, Inc.
Pasadena, CA | www.kinemetrics.com
Mauricio Ciudad-Real | 626/795-2220
mcr@kmi.com
Codes: 03800, 09800, 14000, 76400, 84600, 86300*

Klein Consulting LLC
Norwich, CT | www.kleinconsultllc.com
Ralph L. Klein | 860/885-1980
ralph.klein@kleinconsultllc.com
Codes: 14000, 40900

Knowledge Relay
Cypress, CA | www.knowledgerelay.com
Lee Gliddon | 714/761-6760 | 800/447-2633
lee.gliddon@knowledgerelay.com
Codes: 19700

Konecranes Nuclear Equipment & Services LLC
New Berlin, WI | www.konecranes.com
Steve Lawrence | 262/364-5700
steve.lawrence@konecranes.com
Stamps: Quality Compliant to ISO 9001, 10CFR50 App. B & NQA-1
Codes: 09950, 13600, 14000, 68000, 72300, 81680, 81710, 87000*

KROHNE, Inc.
Beverly, MA | us.krohne.com
Jeff Shen | 978/535-6060 | 800-FLOWING
j.shen@krohne.com
Codes: 03200, 40050

KSB, Inc.
Henrico, VA | www.ksb.com
Loyal Fischer | 330/239-3900 | loyal.fischer@ksb.com
Stamps: N, NPT, NS, Classes 1, 2, 3, TUV-Pfalz e.V:AD-HPO, TRD 201, TRR 100, DIN EN 729-2; KTA 1408.3, KTA 3201.3; TUV Cert. DIN EN ISO 9001, SLV: DIN 18800 T7; VGB:KTA 1401.
Codes: 47400, 64700, 64750, 75190, 90250, 90280, 90330, 90600, 91000, 91260, 91380*

LabLogic Systems, Inc.
Tampa, FL | www.lablogic.com
Ashvin Boodhun | 813/626-6848 | 800/875-4687
aboodhun@lablogic.com
Codes: 03200, 03800, 04000, 17950, 25250, 55040

Labor Sync
Dumont, NJ | www.laborsync.com
Joe Burger | 877/411-5666 | jburger@laborsync.com
Codes: 12900

Lambda Technologies
Cincinnati, OH | www.lambdatechs.com
Julie Prevey | 513/561-0883 | 800/883-0851
jprevey@lambdatechs.com
Codes: 03800, 17650, 44000, 56600, 84600

Lancs Industries
Albuquerque, NM | www.lancsindustries.com
Lewis E. Byrd | 505/738-7200
sales@lancsindustries.com
Stamps: Certification by SEG.
Codes: 10850, 10900, 14300, 27450, 37130, 68000, 73550, 77800, 83210, 86300, 93040*

Leak Testing Specialists, Inc.
Orlando, FL | leaktestingspecialists.com
Melissa Ramos | 407/737-6415
melissa.ramos@leaktestingspec.com
Codes: 13850, 14000, 14300

LeBlond and Associates, LLC
Libertyville, IL | www.leblondassociates.com
Peter LeBlond | 847/549-8775 | leblond@prodigy.net
Codes: 14000, 86300, 86500

Lenox Instrument Co., Inc.
Trevose, PA | www.lenoxinst.com
Bill Lang | 215/322-9990 | 800/356-1104
bill@lenoxinst.com
Codes: 26230, 40900, 92800

LGH
Bridgeview, IL | www.rentlgh.com
708/598-4727 | 800/878-7305
rentals@rentlgh.com
Codes: 18600, 26230*

Lightbridge Corp.
Reston, VA | www.ltbridge.com
James Fornof | 571/730-1200 | jfornof@ltbridge.com
Seth Grae | 571/730-1200 | sgrae@ltbridge.com
Codes: 14000

Lights Camera Action, LLC
Gilbert, AZ | www.lights-camera-action.net
Walt Ahland | 480/345-0642 | 877/345-0642
wahland@lights-camera-action.net
Codes: 08800, 17650, 26230, 45550, 73300, 83600, 86130

LND, Inc.
Oceanside, NY | www.lndinc.com
Bill Lehnert | 516/678-6141 | info@lndinc.com
Codes: 04000, 17950, 21270, 25000, 26080, 37130, 54750, 55040, 55060, 74150, 93040*

L Rettinger Energy Technology Solutions
Collier Township, PA
Larry Rettinger | 412/279-5221
ltrettinger@comcast.net
Codes: 13850, 18600

Lucideon
Durham, NC | www.lucideon.com/nuclear
Mary Beth Sprott | 919/504-4600
marybeth.sprott@lucideon.com
David Barrientos | 919/985-1226
david.barrientos@lucideon.com
Codes: 03800, 14000, 25600, 84600, 93040

LUDECA, Inc.
Doral, FL | www.ludeca.com
Ron Lambert | 305/591-8935 | sales@ludeca.com
Codes: 03800, 14000, 40050, 47400, 54750

Ludlum Measurements, Inc.
Sweetwater, TX | www.ludlums.com
Allan Hartfield | 325/235-5494 | 800/622-0828
ahartfield@ludlums.com
Codes: 04000, 55040, 55060*

A. C. Macris, Consultants
Mystic, CT | www.themacrisgroup.com
A. C. Macris | 860/572-0043 | acmpc@acmacris.com
Codes: 14000, 53950, 86300, 86500

Magnatech LLC
East Granby, CT | www.magnatechllc.com
J. G. Emmerson | 860/653-2573 x10
info@magnatechllc.com
Codes: 59850, 83600*

Magnetrol International
Aurora, IL | www.magnetrol.com
M.D. Tikalsky | 630/969-4000 | 800/624-8765
mtikalsky@magnetrol.com
Stamps: Certification by 10CFR50 App. B
Codes: 03200, 40050

Major Tool & Machine, Inc.
See advertisement on page 91
Indianapolis, IN | www.majortool.com
Joel Manship | 317/917-2619
jmanship@majortool.com
Stamps: N-Class 1, 2, 3 & MC Vessels; Class 1, 2 & 3 Piping Systems; Class 2 & 3 Storage Tanks, Class CS Core Support Structures and Class TP Transport Packaging; NPT - Class 1, 2, 3, CS, MC & TP. Fabrication without design responsibility. N3 - Construction of Class TC Transporation Containments. Stamps N, N3, NA, NPT, NS, U, U2 and R. Audited and compliant to NQA-1. Certifications to ISO 9001:2015, AS9100(D), NADCAP.
Codes: 14300, 30500, 36000, 56600, 66280, 68000, 79360, 81710, 83150, 87380, 87395, 92300, 93900*

Manafort Brothers Inc.
Plainville, CT | www.manafort.com
Vince Mondo | 860/793-6451
vmondo@manafort.com
Codes: 13850, 20300, 20700

Marshallton Research Laboratories, Inc.
See advertisement on page 97
King, NC | www.marshalltonlabs.com
Mac Foster | 336/983-2131
info@marshalltonlabs.com
Codes: 20350

Master-Lee Engineered Products Inc.
Latrobe, PA | www.masterlee.com
John Buchta | 724/805-4905 | 800/537-6007
buchta-jp@masterlee.com
Codes: 10780, 26230, 30500, 45550, 61570, 72300, 90100, 92800*

Materials and Chemistry Laboratory, Inc. (MCLinc)
Oak Ridge, TN | www.mcl-inc.com
Barry Stephenson | 865/276-6910
bstephenson@mcl-inc.com
Stamps: ISO/IEC 17025:2005(DOECAP-AP)AIHA Accredited (IHLAP) Radioactive Materials License
Codes: 03800, 14000, 37200, 84600

Mazur Instruments
Castle Rock, CO | www.mazurinstruments.com
Vince Mazur | 303/325-7463
vince.mazur@mazurinstruments.com
Codes: 17950

M. Braun Inc.
See advertisement on page 33
Stratham, NH | www.mbraun.com
Michael Boutin | 603/773-9333
m.boutin@mbraunusa.com
Codes: 04000, 27450, 32250, 36000, 37130, 40050, 79360, 81680, 84150, 87400

McWane and Assoc.
San Jose, CA | www.materialsite.com
Odell McWane | 559/375-1307
omcwane@materialsite.com
Stamps: Registered Professional Welding Engineer
Codes: 14000

Mega-Tech Services, LLC
Cooksburg, PA | www.mega-techservices.biz
John Bowen | 804/789-1577
jbowen@mega-techservices.biz
Codes: 03800, 13050, 14000, 20300, 20350, 81710

MillenniTEK, LLC
Knoxville, TN | www.millennitek.com
Steve Getley | 865/966-2170
steve.getley@millennitek.com
Codes: 03800, 13700, 14000, 41200, 55490, 77800

Miller Pipeline
Indianapolis, IN | www.millerpipeline.com
Chris Schuler | 317/653-5203 | 800/428-3742
chris.schuler@millerpipeline.com
Daniel Watters | 317/653-5298 | 800/428-3742
daniel.watters@millerpipeline.com
Codes: 13850, 40900, 47400

Miller Transfer
Rootstown, OH | www.millertransfer.com
David Cochran | 330/414-0288 | 800/669-6877
dcochran@millertransfer.com
Stamps: Hazmat Certification, SC&RA, CTPAT, PIP-PEN, ISO, FastExpress, Smartway, UIIA, TAT-Truckers Against Trafficking
Codes: 87000

Mirion Technologies (Canberra) Inc.
Meriden, CT | www.mirion.com
203/238-2351 | 800/243-3955
customersupport@canberra.com
Stamps: Certification by ISO 9001.
Codes: 12900, 14000, 19700, 20000, 26230, 37130, 40900, 67380

Mirion Technologies Dosimetry Services
Irvine, CA | www.mirion.com
Dana Banks | 949/297-1851 | 800/251-3331
dbanks@mirion.com
Stamps: NVLAP
Codes: 37130, 37200, 55060

Mirion Technologies, Inc.
Atlanta, GA | www.mirion.com
Christy Phillips | 770/432-2744
cphillips@mirion.com
Codes: 03180, 03200, 03800, 04000, 08800, 09750, 09800, 12800, 13400, 21270, 21300, 21310, 26900, 26910, 26970, 47400, 54750, 55040, 58000, 71190, 72300, 73300, 74150, 75190, 75700, 75850, 77750, 83600, 84150, 84600, 90250, 90800, 91260, 92800, 93040, 95900*

Mirion Technologies (IST) Corp. (Sensing Systems Div.)
Horseheads, NY | www.mirion.com
Tim Pelot | 607/562-4530 | tpelot@mirion.com
Stamps: N Classes 1, 2, 3 & MC Vessels, Class 1, 2, 3 Valve Parts & Appurt., Class 1, 2, 3, Valves, Class MC Penetrations & Assem.
Codes: 08800, 17950, 26910, 45550, 54750, 73300, 75190, 83600*

Mohawk Safety
Manchester, CT | www.mohawksafety.com
James W. Francoline | 860/643-5107 | 800/394-6853
sales@mohawksafety.com
Codes: 27450, 83120, 84150, 95850*

Mound Technical Solutions, Inc.
Miamisburg, OH | www.moundtech.com
Doug McClelland | 937/865-3715
doug@moundtech.com
Codes: 04000, 55040, 74150

NAC International Inc.
See advertisement on page 119
Peachtree Corners, GA | www.nacintl.com
George Vaughan | 678/328-1222 | 800/241-0507
gvaughan@nacintl.com
Juan Subiry | 678/328-1282 | 800/241-0507
jsubiry@nacintl.com
Codes: 03800, 14000, 14300, 30040, 30500, 68000, 77800, 81710, 86300, 87000

NAC LPT LLC
Sewickley, PA | www.naclpt.com
Mike Miller | 724/480-7592 | 888/484-4031
mmiller@naclpt.com
Codes: 03800, 09950, 14000, 14300, 20300, 68000

National Electric Coil
Columbus, OH | www.national-electric-coil.com
Steve Jeney | 614/488-1151
sendinfo@national-electric-coil.com
Codes: 47400

National Inspection & Consultants
Fort Myers, FL | www.nicinc.com
Michael D. Vigne | 239/939-4313
michael.vigne@iss-na.com
Stamps: Certification by ISO 17025, ISO9001 and AS9100, Nadcap & FAA Repair Station
Codes: 14000, 40900, 86300

National Technical Systems (NTS) (Nuclear Engineering & Test Services)
Huntsville, AL | www.nts.com/markets/nuclear
Greg Mason | 256/603-0903 | greg.mason@nts.com
Codes: 03200, 03800, 08800, 09800, 12800, 12900, 14000, 14300, 19700, 20000, 26080, 40050, 40900, 47400, 53950, 54750, 56600, 63400, 76400, 84600, 93040

Navarro Research and Engineering, Inc.
Oak Ridge, TN | www.navarro-inc.com
JoEllen Kuszmaul | 865/220-9650 | 866/681-5265
kuszmaul@navarro-inc.com
Codes: 03800, 14000, 20300, 20700, 25400, 26100, 37200, 93040

Netzsch Instruments North America LLC
Burlington, MA
www.netzsch-thermal-analysis.com/us/
Melinda Tucker | 303/895-8175
melinda.tucker@netzsch.com
Anthony Maletta | 781/825-5853
anthony.maletta@netzsch.com
Codes: 03800, 04000, 14000, 84150, 84600*

New Millennium Nuclear Technologies International
Lakewood, CO | www.nmnuclear.com
Sue Aggarwal | 303/984-5788
saggarwal@nmnuclear.com
Stamps: Certification by ISO 9001.
Codes: 13050, 20350, 25600, 26100, 93040

New York Blower Company
Willowbrook, IL | www.nyb.com
Margaret Wood | 630/794-5700 | 800/208-7918
mwood@nyb.com
Codes: 03000, 19450*

NextAxiom Technology, Inc.
San Francisco, CA | www.nextaxiom.com
John Manoogian | 415/637-1580
info@nextaxiom.com
Codes: 12800

Nochar, Inc.
Indianapolis, IN | www.nochar.com
Dennis Campbell | 317/613-3046
dennis.campbell@nochar.com
Stamps: SEG Certified Incinerable; NTS, WIPP, Envirocare approved.
Codes: 79370*

Nord-Lock Inc.
Clinton, PA | www.nord-lock.com
Julie Pereyra | 412/279-1149 | 877/799-1097
julie.pereyra@nord-lock.com
Stamps: ISO 9001, ISO 14001, DNV, ABS, DIBt, TUV
Codes: 26900, 47400, 86130*

North GeoEngineering Services, LLC
Albuquerque, NM | northges.com
John North | 505/400-2919
john.northges@gmail.com
Codes: 03800, 13850, 14000

North Wind Group
Idaho Falls, ID | www.northwindgrp.com
Brady Bigelow | 303/263-9201
bbigelow@northwindgrp.com
Andy Williams | 419/707-2135
andy.williams@northwindgrp.com
Codes: 03800, 06790, 09750, 09800, 13850, 20350, 22410, 37130, 37200, 47400, 71190, 86300, 87000*

NovaTech
Lynchburg, VA | www.novatechusa.com
Mitch Saville | 434/239-1979
mitch@novatechusa.com
Stamps: Certification by Professional Engineer - Virginia.
Codes: 03800, 10780, 14000, 14300, 19700, 20300, 25400, 30500, 40900, 53950, 54750, 55490, 56600, 68000, 72300, 75190, 77600, 77750, 84150, 84600, 86130, 86300, 86500, 90100, 96200

NuclearConsultants.com
Ann Arbor, MI | www.nuclearconsultants.com
Dale Lancaster | 814/574-1912
dale@nuclearconsultants.com
Codes: 03200, 03800, 12800, 14000, 14300, 30040, 77750, 77800, 81680

Nuclear Economics Consulting Group (NECG)
Alexandria, VA | www.nuclear-economics.com
Edward Kee | 202/370-7713
edk@nuclear-economics.com
Codes: 14000

Nuclear News Magazine
La Grange Park, IL | www.ans.org/nn
Rick Michal | 708/579-8216 | nucnews@ans.org
Jeff Mosses | 708/579-8225 | 800/NUC-NEWS
nucnews1@ans.org
Codes: 40700

Nuclear Shielding Supplies & Service
Tucson, AZ | www.nuclearshielding.com
M.S. Chopra/Cari Barros | 520/838-0961
info@nuclearshielding.com
Codes: 13700, 14000, 14300, 36900, 55490, 66280, 77750, 77800*

Nuclear Systems Associates, Inc.
Brea, CA | www.nuclearsystems.com
Charles Divona | 949/499-9980
nuclearsystems@cox.net
Codes: 14000, 30500, 45550, 72300

Nuclear Technology Services, Inc.
Roswell, GA | www.ntsincorg.com
Dr. Hermon Rao | 770/663-0711
hermonrao2@aol.com
Codes: 09800, 14000, 37130, 37200, 67380, 68950, 86300

Nuclear Training Institute
Norcross, GA | www.nucleartraininginstitute.com
Sean Ruth | 678/268-3364
sean@nucleartraininginstitute.com
Jim Garrison | 678/268-3364
jim@nucleartraininginstitute.com
Stamps: NQA-1
Codes: 14000, 86300, 86400

NUCON International, Inc.
Columbus, OH | www.nucon-int.com
Robert Sommer | 614/846-5710 x125 | 800/992-5192
sales@nucon-int.com
Eric Banks | 614/846-5710 x126 | 800/992-5192
sales@nucon-int.com
Codes: 04000, 09800, 14000, 26230, 27450, 32250, 40900, 41000, 54750, 56600, 73550, 79370, 86300, 87380, 87400*

Nu-Energy Technologies, Inc.
Providence Forge, VA
www.nu-energytechnologies.com
David Cruise | 804/337-9331
info@nu-energytechnologies.com
Codes: 08800, 10780, 13600, 25600, 45550

NuSource LLC
Alexandria, VA | www.nusourcellc.com
Waylon Waters | 810/223-4483
wwaters@nusourcellc.com
Stamps: ASME N Stamp
Codes: 03000, 03800, 08800, 14000, 14300, 26900, 27180, 27450, 27650, 37600, 41700, 53950, 60100, 66280, 83150, 90600, 90800, 91260, 91380, 92300

NuVision-HWM
Pittsburgh, PA | www.nuvisionengineering.com
Joe Dixon | 651/356-5605 | jdixon@nuvisioneng.com
Codes: 10780, 12800, 47400, 47600, 53950, 68000, 72300, 73300, 73620

NV5/Dade Moeller
Richland, WA | www.nv5.com
Stephen Bump | 509/942-3639
steve.bump@nv5.com
Codes: 03800, 13850, 14000, 20300, 25400, 26100, 37130, 37200, 40900, 54750, 71190, 77750, 84150, 86300, 93040

Orano Decommissioning Services
Hudson, MA | www.orano.group/en/expertise/range-of-services/dismantling-of-nuclear-facilities
Geoff Wilde | 980/229-2738
geoff.wilde@orano.group
Codes: 20300, 68000, 87000, 93040

Orano Federal Services
See advertisement on page 81
Charlotte, NC | www.orano.group/en
Lynn Butler | 704/805-2845
lynn.butler@orano.group
Codes: 03800, 09730, 09950, 13850, 14000, 14300, 20300, 20350, 36000, 56600, 68000, 79360, 87000, 87400, 93040

Orano TN
Columbia, MD | www.orano.group/en/expertise/range-of-services/transporting-and-storing-nuclear-material
Roger Maggi | 434/841-1859
roger.maggi@orano.group
Codes: 14300, 20300, 68000, 81680, 81710, 87000, 93040

ORTEC
Oak Ridge, TN | www.ortec-online.com
Lena Russell | 865/483-2173 | 800/251-9750
lena.russell@ametek.com
Codes: 03200, 03800, 04000, 09750, 09800, 17950, 19700, 21270, 25000, 25250, 26080, 26230, 37130, 55040, 55060, 58000, 63400, 64750, 75850, 77800, 86300*

OTEK Corp.
Tucson, AZ | www.otekcorp.com
Dr. Otto Fest | 520/748-7900 | sales@otekcorp.com
Stamps: Class 1E/Appendix B & MIL-Spec Manufacturer
Codes: 17950, 25000, 40050, 53950, 54750, 84150*

Overhoff Technology Corp. (A Div. of US Nuclear Corp.)
Milford, OH | www.overhoff.com
Dell Williamson | 513/248-2400
sales@overhoff.com
Ian Embry | 818/883-7043 | ian@overhoff.com
Codes: 03200, 17950, 21270, 26080, 55040*

Pacific Radiation
Altadena, CA | www.pacificrad.com
Dr. Dan Gollnick | 626/798-8100
dr_dan@pacificrad.com
Codes: 86300, 86500

Packaging Research and Design
Brandon, MS | packagingresearch.com
Damon Hawk | 601/856-9791 | 800/833-9364
damon@packagingreaearch.com
Codes: 14300

PacTec, Inc.
See advertisement on page 110
Clinton, LA | www.pactecinc.com
Bill Smart | 225/683-8602 | 877/554-2541
billsmart@pactecinc.com
Trey Castleberry | 225/683-8602 | 877/554-2541
treycastleberry@pactecinc.com
Codes: 09950, 14300, 22410, 27450, 37130, 68000, 79360

Paragon Energy Solutions
Fort Worth, TX | www.paragones.com
John Portillo | 817/239-1693 | 800/448-4124
jportillo@paragones.com
Stamps: 10CFR50 Appendix B, NQA-1, ASME III N, NS, NPT
Codes: 03000, 03800, 17950, 21270, 22200, 27450, 37600, 40050, 47400, 63400, 64700, 75190, 76400, 83150, 90250, 90600, 90800, 91000, 91260

Par-Kut International, Inc.
Harrison Twp., MI | security-booth.parkut.com
Tom Duemling | 586/468-2947 | 800/394-6599
sales@parkut.com
Codes: 75700*

PAR Systems, LLC
Shoreview, MN | www.par.com
Rob Owen | 651/484-7261 | 800/464-1320
rowen@par.com
General Information | info@par.com
Stamps: ISO 9001:2008; AS9001-2009 Revision C; NQA-1; GMP1; NOG-1; CMAA; ASME; NRSC
Codes: 03800, 08800, 10780, 12800, 14000, 18590, 18600, 20350, 20700, 30500, 39650, 40900, 47400, 47600, 53950, 56600, 66280, 68000, 72300, 73620, 79360, 81710, 84150, 86130, 93900

Paschal Solutions, Inc.
Knoxville, KY | www.paschalsolutions.com
Tracey Henson | 270/705-9037
thenson@paschalsolutions.com
Codes: 03200, 03800, 14000, 20300

Pave Technology Co.
Dayton, OH | www.pavetechnologyco.com
Walter Wood | 937/890-1100 x103
help@pavetechnologyco.com
Stamps: Certification by ISO 9001:2015. ASME NQA-1a-2009 CGD. L2 helium leak test trained.
Codes: 75190, 90100*

Pawling Engineered Products, Inc.
Pawling, NY | www.pawlingep.com
Craig Busby | 845/855-1000 | 800/431-0101
cbusby@pawlingep.com
Stamps: Certification by ISO 9001:2000; 10CFR50, App. B.
Codes: 75190*

Perma-Fix Environmental Services, Inc.
See advertisement on pages 12–13
Oak Ridge, TN | www.perma-fix.com
Brian Wood | 352/251-2071 | 800/905-0501
bwood@perma-fix.com
Sarah Roberto | 865/251-2088 | 800/905-0501
sroberto@perma-fix.com
Codes: 09750, 09800, 14000, 17950, 20300, 20350, 20700, 26080, 26100, 26230, 37130, 37200, 41000, 67380, 68000, 93040

Perma-Fix Environmental Services Inc. (Perma-Fix Northwest Richland) (Wholly Owned Sub. of Perma-Fix Environmental Services, Inc.)
Richland, WA | www.perma-fix.com
Richard Grondin | 509/375-5160
rgrondin@perma-fix.com
Codes: 93040

Perma-Fix Environmental Services Inc. (Perma-Fix of Florida) (A Wholly Owned Sub. of Perma-Fix Environmental Services, Inc.)
Gainesville, FL | www.perma-fix.com
Randy Self | 352/395-1368 | rself@perma-fix.com
Codes: 93040

Petersen Inc.
See advertisement on Cover 2
Ogden, UT | www.peterseninc.com
Rob Despain | 801/732-2000 | 800/410-6789
robd@peterseninc.com
Stamps: Facilities in Utah and Idaho. ASME VIII Div. 1 U, U2, S, Stamp; National Board Inspection Code R Stamp; ASME NQA-1; NRC Subpart H of 10 CFR Part 71; ASME B31.1 and B31.3; API 1104; AWS D1.1, D1.2, D1.3, D1.6; ISO 9001-2018; AS9100D; AISC.
Codes: 09730, 14300, 68000, 81680, 83150, 86130, 92300, 96200*

PHDS Co.
Knoxville, TN | www.phdsco.com
Ethan Hull | 865/481-3725 | ethanhull@phdsco.com
Codes: 17950, 20300, 21270, 37200

Pioneer Motor Bearing Co.
Kings Mountain, NC | www.pioneer1.com
Dr. Lyle Branagan | 704/937-7000 | 888/813-9001
engineering@pioneer1.com
Codes: 03800, 14000, 47400

Plant Decommissioning
Lake Villa, IL | plantdecommissioning.com
Russ Valin | 847/265-8800
sales@plantdecommissioning.com
Codes: 20300, 26240, 47600, 53950, 79360, 86130, 96200

Plastocor, Inc.
Hingham, MA
Jim Mitchell | 724/942-0582 | jem@plastocor.com
Codes: 11400, 37600, 47400*

PMT Nuclear
Woodridge, IL | www.pmtnuclear.com
Charles Wojcik | 630/887-7700 | 800/794-5033
cwojcik@ams-pmt.com
Stamps: PP, R, U.
Codes: 03000, 03800, 13700, 13850, 14000, 19450, 26900, 27180, 27450, 36000, 37600, 40900, 41200, 47400, 59800, 59850, 60100, 71500, 75190, 75700, 77750, 83150, 84600, 86300, 86500, 90250, 92300, 93900*

Porvair Filtration Group Inc.
Ashland, VA | www.porvairfiltration.com
Guenter Pesch | 804/550-1600
guenter.pesch@porvairfiltration.com
Codes: 14300, 27450, 32250, 93040*

Power & Energy Systems Services
Oradell, NJ
Komandur Sunder Raj | 201/638-4635
powerengy@aol.com
Codes: 03800, 12800, 14000, 86300, 86500*

Powerfect Service, Inc.
Brick, NJ | www.powerfect.com
Mary Jane Luddy | 732/202-1178
powerfect@verizon.net
Eric Svensson | 732/202-1133 | eric@powerfect.com
Codes: 10780, 14000, 37600, 86300

Power System Sentinel Technologies, LLC
Warrior, AL | www.psstech.com
Chris Melhorn | 205/631-3357
cmelhorn@psstech.com
Stamps: Our Quality Assurance (QA) and Quality Control (QC) programs are standard with all our solutions. Our staff is trained to strict compliance to quality standards in accordance with ASME NQA-1, 10CFR50 Appendix B, and CSA N299.3 criterion. The PSStech audited and approved Appendix B process ensures rigorous standards are adhered to throughout the design and implementation process.
Codes: 03180, 03800, 64750, 84600, 86300

Precision Custom Components, LLC
See advertisement on page 121
York, PA | www.pcc-york.com
James C. Stouch, P.E. | 717/848-1126 x2362 |
jstouch@pcc-york.com
Brian Hunt | 717/848-1126 x2592
bhunt@pcc-york.com
Stamps: ASME Sect. III (N, NS, NA, NPT Stamps); ASME Sect. VIII Div. 1, 2 and 3 (U, U2, U3 Stamps); MIL-Q-9858 with QRC82
Codes: 03800, 09800, 10780, 14000, 14300, 30500, 40900, 53950, 56600, 66280, 81710, 83150, 92300, 93900

Preferred Engineering Corp. (Sub. of Preferred Utilities Mfg. Corp.)
Danbury, CT | www.preferredengineering.com
Ivan Cabrera | 203/743-6741
icabrera@preferred-mfg.com
Codes: 03800, 14000, 20350, 30500, 47400, 61570, 75190, 77800

Premier Technology, Inc.
Blackfoot, ID | www.ptius.com
John Davis | 208/681-3005 | jdavis@ptius.net
Derek Moss | 208/851-0744 | dmoss@ptius.net
Stamps: ASME Section VIII, U, R, & S; ASME Section III, NA, NS, NPT; ASME NQA-1 Certificate
Codes: 14300, 36000, 45550, 47400, 53950, 68000, 77800, 81710, 83150, 92300, 93900, 95750

Presray Corp. (Div. of Pawling Corp.) (Critical Containment Solutions)
Wassaic, NY | www.presray.com
Jason Smith | 845/373-6620 | jsmith@presray.com
Kevin Harris | 845/373-6718 | kharris@presray.com
Codes: 75190, 75700*

Primm Consulting, LLC
Knoxville, TN | www.primmconsultingllc.com
Trent Primm | 865/805-2130
trentprimm@primmconsultingllc.com
Codes: 12800, 14000

Protean Instrument Corp.
Knoxville, TN | www.proteaninstrument.com
Greg Watson | 865/392-4600
picinfo@proteaninstrument.com
Shawn Googins | 865/392-4600
picinfo@proteaninstrument.com
Codes: 17950, 26080, 37130*

Protective Plastics, Inc.
Greenville, SC
Kim Chasteen | 864/234-6789
protect1@prodigy.net
Codes: 10850, 10900, 36000, 37130, 64300, 83210, 95850

PROTEM USA
Evergreen, CO | www.protemusa.com
303/598-8468 | a.fournel@protemusa.com
n.reicher@protem-gmbh.de
Stamps: ISO 9001 V2015, CEFRI E, EDF UTO 114
Codes: 10780, 22700, 53950, 86300, 93900

PTP Spent Fuel Services, LLC
Grand Island, NY | www.ptpsfs.com
Bill Schaab | 716/699-5515 | 866/699-5515
ptp@ptpsfs.com
Codes: 14000, 14300, 18600, 20300, 30500, 68000, 81680, 81710, 93040*

RADeCO, Inc.
Plainfield, CT | www.radecoinc.com
Brad Lovendale | 860/564-1220
blovendale@radecoinc.com
Codes: 09750, 09800, 26080, 27450, 37130, 37200, 58000, 64750, 73300, 74150, 84150, 90100, 90800*

Radiac Research Corp.
Brooklyn, NY | www.radiacenv.com
John V. Tekin, Jr. | 718/963-2233 x201
jtekin@radiacenv.com
Joseph Spektor | 718/963-2233 x205
jspektor@radiacenv.com
Codes: 14000, 93040

Radiation Control, Inc.
Tallahassee, FL
Walt Cofer | 850/519-5351
radcontrol@embarqmail.com
Codes: 14000, 86300, 86500

Radiation Safety & Control Services, Inc.
Seabrook, NH | www.radsafety.com
Jennifer Collins | 603/778-2871 x222 | 800/525-8339
jacollins@radsafety.com
Codes: 03180, 03200, 03800, 04000, 09800, 10850, 12800, 14000, 14300, 17950, 20300, 25250, 25300, 26230, 27450, 37130, 37160, 40900, 41000, 55040, 67380, 68950, 86300, 86400, 93040*

Radiological Solutions Inc.
Rockdale, IL | www.radiologicalsolutions.com
Richard Kohlmann | 815/207-4300
rkohlmann@radiologicalsolutions.com
Codes: 04000, 14000, 20350, 26080, 27180, 27450, 37200, 37600, 53950, 54750, 55040, 64750, 67380, 68000, 74150, 86300, 93040

Radium Inc.
Waynesboro, VA | www.radiuminc.com
Cam Abernethy | 540/942-5734
cabernethy@radiuminc.com
Codes: 10850, 10900, 11650, 12800, 14000, 14300, 25400, 26230, 36000, 37130, 45550, 47600, 72300, 73300, 73550, 73620, 75850, 77750, 77800, 83600, 92800

RadQual, LLC
Idaho Falls, ID | www.radqual.com
Stanley Fabregas | 817/395-2462
stanley@radqual.com
Codes: 68950, 79700*

Radwaste Solutions Magazine
La Grange Park, IL | www.ans.org/rs
Tim Gregoire | 414/530-2455
editor@radwastesolutions.org
Jeff Mosses | 708/579-8225 | 800/682-6397
radwastemag@ans.org
Codes: 40700

Ray Termini & Associates LLC
Wheaton, IL
Ray Termini | 630/818-5707
raytermini79@gmail.com
Stamps: PMP, Project Management Professional
Codes: 14000

Red Wolf Associates
Cary, NC | www.redwolfassociates.com
Joe Sinodis | 919/467-9686 x120
joe.sinodis@redwolfassociates.com
Codes: 03800, 12800, 14000, 20300, 37200, 77750, 86300*

Reef Industries, Inc.
See advertisement on page 111
Houston, TX | www.reefindustries.com
Ray Channell | 713/507-4251 | 800/231-6074
rchannell@reefindustries.com
Stamps: Meets NFPA 701 Large Scale Test and Certified Incinerable.
Codes: 08800, 11400, 14300, 37130, 64300, 68000, 77800, 81710, 83210, 93040*

Remote Ocean Systems (ROS)
San Diego, CA | www.rosys.com
James Connell | 858/565-8500 | sales@rosys.com
Codes: 72300, 73300, 83600

ReNuke
Oak Ridge, TN | www.renuke.com
Mark Kirshe | 410/991-7628 | mark@renuke.com
Codes: 17950, 37130, 55040, 55060, 67380, 74150, 86300*

RETAQS, Inc.
Blue Bell, PA | www.retaqs.com
Tom Tomlinson | 610/277-8991 x201
tom@retaqs.com
Codes: 14000, 20300, 86300

Rexon Components, Inc.
Beachwood, OH | www.rexon.com
Dr. M.R. Farukhi | 216/292-7373 | sales@rexon.com
Codes: 17950, 37130, 55040, 55060*

R&G Laboratories, Inc.
Tampa, FL | www.randglabs.com
Cheryl Huff | 813/643-3513 | 866/854-1177
cheryl@randglabs.com
Stamps: 10CFR50 App. B QA/QC program, and ISO 17025
Codes: 03800

Rich Industries Inc.
New Philadelphia, OH | www.richindustriesinc.com
David Patterson | 330/339-4113
davepatterson@richindustriesinc.com
Codes: 10850, 10900, 14300, 37130, 64300, 77800, 78700, 83210*

Right Brain Sekurity
Oswego, IL | rbsekurity.com
Roger Johnston | 630/551-0740
roger@rbsekurity.com
Codes: 03800, 14000, 75600, 75850, 86300

Robatel Technologies, LLC
Roanoke, VA | www.robateltech.com
Jared Bower | 540/989-2878 | 855/819-1874
info@robateltech.com
Stamps: NQA-1, 10 CFR Part 71
Codes: 14000, 14300, 20300, 36000, 47400, 47600, 55490, 68000, 72300, 77800, 81710, 83150

Roberts Engineering Services, Inc.
Stuart, FL
C. L. Roberts | 772/220-0584
res1977@bellsouth.net
Codes: 00400, 55490, 86130

Rockwell Automation, Inc.
Milwaukee, WI | www.rockwellautomation.com
Product Information | 414/382-2000 | 888/382-1583
webmaster@rockwellautomation.com
Codes: 03200, 12800, 12900, 14000, 19700, 25000, 26080, 40050, 40900, 41000, 47620, 63400, 72300, 84150, 84600

Rolls-Royce Nuclear I&C
Pittsburgh, PA | www.rolls-royce.com/products-and-services/nuclear/product-finder/instrumentation-and-control-solutions.aspx
William J. Rosko | 412/320-3094
william.rosko@rolls-royce.com
Codes: 08800, 09750, 09800, 14000, 17950, 21270, 25000, 26080, 40050, 41000, 63400, 71190, 84600, 86300, 86400, 93040

Rosemount Nuclear Instruments, Inc.
Chanhassen, MN | www.emerson.com/rosemountnuclear
Chris Victor | 952/949-5200 | 800/999-9307
rnii.info@emerson.com
Stamps: 10CFR50 Appendix B, 10CFR 21, ISO 9001-2015,NQA-1-1994, KTA 1401, CSA CAN3-Z299.1-85, IAEA 50-C-Q, IAEA GS-R-3
Codes: 03200, 25000, 54750

Rotating Equipment Repair
Sussex, WI | www.rerpump.com
Katie Wilde | 262/844-2025
katie.wilde@rerpump.com
Stamps: NPT, NR, NCA-3800 Material Organization, SHARP
Codes: 64700, 64750

RSO, Inc./Radiation Service Organization

Laurel, MD | www.rsoinc.com

David Wellner | 301/953-2482 | 888/723-5463
radmaterials@rsoinc.com

Steve McDaniel | 301/953-2482 | 888/RAD-LINE
sales@rsoinc.com

Codes: 09800, 10850, 14000, 14300, 17950, 20300, 20350, 26100, 26230, 37130, 37200, 55040, 67380, 77800, 79370, 83110, 83210, 84600, 86300, 87000, 93040

Sargent & Lundy

Chicago, IL | www.sargentlundy.com

Thomas J. Behringer | 312/269-7218
tbehringer@sargentlundy.com

Stamps: Sargent & Lundy's company-wide Quality Management Program is ISO 9001: 2015 certified. Sargent & Lundy's Nuclear Quality Assurance Program is maintained as a Topical Report that is approved by the U.S. Nuclear Regulatory Commission. It meets Appendix B and NQA-1 requirements and also conforms to the requirements of ASME NQA-1.

Codes: 03800, 12800, 13850, 14000, 20300, 26100, 37200, 40900, 47400, 56600, 67380, 71190, 75600, 77750, 84600, 86300, 86500

Schneider Electric Gutor Technologies

Houston, TX | www.gutor.com

Michael May | 865/230-3582 | michael.may@se.com

Stamps: Approved 10CFR50 App. B and NQA-1 Quality Program. ISO 9001/2008, Certification by Bureau Veritas NQA-1 Dedication of Firmware for Safety Class Applications

Codes: 63400*

SCHOTT Electronic Packaging (A Div. of SCHOTT North America, Inc.)

Southbridge, MA | www.schott.com/en-us/products/eternaloc

Tonya Durkin | 949/302-5020
tonya.durkin@us.schott.com

Codes: 26910, 26970, 75190, 77800*

Schulz Electric, Timken Power Systems

New Haven, CT | www.schulzelectric.com

Matt Radulski | 203/859-7430 | 800/826-1425
mattr@schulzelectric.com

Stamps: QA Program: 10CFR50 App. B, NQA 1-2008/2009a, successful audits to CSA Z299 requirements; certification to ISO 9001:2015.

Codes: 03800, 08800, 14000, 18600, 20350, 37200, 40900, 47400, 56600, 81680, 84150, 84600, 90250, 93900, 95900*

Schutte and Koerting

Trevose, PA | www.s-k.com

Power Sales | 215/639-0900 | sales@s-k.com

Stamps: ASME Section VIII, ANSI B16.34 & B16.5, API 611 & 612, NEMA SM23/24

Codes: 64750, 90100, 90600, 90800, 91260, 91380*

Seafab Metals Co. (Div. of The Doe Run Co.)

Casa Grande, AZ | www.seafab.com

Joe Snodgrass | jsnodgrass@seafab.com

Codes: 14300, 59800, 77800

SecurMAR, LLC

Zionsville, IN | www.securmar.com

Cindy C. Harts | 219/661-8964
charts@securmar.com

Kristin M. Harts | 219/661-8964
kharts@securmar.com

Codes: 14000, 75700, 75850*

S.E. International, Inc.

Summertown, TN | www.seintl.com

Beth Cramer | 931/964-3561 | 800/293-5759
radiationinfo@seintl.com

Codes: 17950, 37130, 55040, 55060*

Sensor Networks, Inc.

State College, PA | sensornetworksinc.com

Jeff Drost | 814/466-7207
drost@sensornetworksinc.com

Codes: 12800, 47400, 47600, 72300, 73300, 83600, 84150, 86130*

Sentry Equipment

Oconomowoc, WI | www.sentry-equip.com

Erik Bleske | 262/567-7256
marketing@sentry-equip.com

Stamps: U, ASME - Section VIII, Div. 1. ISO 9001:2015 certified

Codes: 04000, 09800, 17650, 54750, 74150, 74320*

S&G Enterprises, Inc.

Germantown, WI | www.ramflat.com

Mark J. Griffith | 262/251-8300 | 888/726-3528
info@ramflat.com

Codes: 11680, 11700, 68000*

J. L. Shepherd & Assoc.

San Fernando, CA | www.jlshepherd.com

Mary Shepherd | 818/898-2361
sales@jlshepherd.com

Stamps: Certification by USNRC-QA Program-10CFR71, Subpart H, ANSI/ASME NQA-1.

Codes: 14000, 14300, 37130, 93040*

Sidus Solutions LLC

San Diego, CA | www.sidus-solutions.com

Leonard Pool | 619/275-5533 x306
l.pool@sidus-solutions.com

Jackie Broussard | 619/275-5533
jackie_broussard@sidus-solutions.com

Stamps: SDVOSB #: 222120 DVBE: 35907

Codes: 08800, 14000, 45550, 54750, 72300, 73300, 75850, 83600, 92800, 93040*

Simpson Gumpertz & Heger (SGH)

Chicago, IL | www.sgh.com

Chris Hewitt | 312/754-7466 | cmhewitt@sgh.com

Stamps: ANSI/ASME NQA-1; 10CFR830 Subpart A; 10CFR50 App. B; DOE O414.1C

Codes: 03800, 14000, 14300, 18590, 18600, 20300, 20700, 26900, 30500, 36000, 36900, 40900, 47400, 47620, 54750, 61570, 66280, 76400, 77900, 84600

Skolnik Industries

Chicago, IL | www.skolnik.com

Dean Ricker | 773/735-0700 | dean@skolnik.com

Codes: 14300, 68000

Sonic Systems International, Inc.

Houston, TX | www.ssi-group.net

Bill Aston | 281/531-7611 | 800/417-3140
baston@ssi-group.net

Bruce Schlueter | 847/997-2670 | 800/417-3140
bschlueter@ssi-group.net

Codes: 20300, 25400, 30500, 56600*

Southwest Research Institute

San Antonio, TX | www.swri.org

Business Inquiries | 210/522-2122 | ask@swri.org

Stamps: SNT-TC-1A, ISO-9001, ISO-17025, ISO-17020, NELAC, 10 CFR Part 50 App. B, 10 CFR Part 21, NQA-1, 10CFR71 Subpart H

Codes: 03800, 09800, 11400, 12800, 14000, 37200, 40900, 56600, 72300, 73620, 77750, 84600, 86300, 93040

Springs Advanced Technology Group (ATG), LLC

Westminster, CO | www.springsfabatg.com

Michael Wade | 678/428-5278
mikew@springsfabatg.com

Stamps: ASME Certificate of Authorization (U); Boiler and Pressure Vessel Inspectors; ASME NQA-1; ISO 9001:2015 Certification

Codes: 00300, 03000, 14000, 67380

SPX Cooling Technologies, Inc.

Overland Park, KS | www.spxcooling.com

913/664-7400 | 800/462-7539
ct.spxcooling@spx.com

Codes: 03000

SSM Industries, Inc.

See advertisement on page 78

Pittsburgh, PA | www.ssmi.biz

Matt Gorman | 412/777-5101 | mgorman@ssmi.biz

Codes: 03000, 03800, 12800, 19450, 27180, 32250, 83150, 90250

Standish Technologies International

Deerfield Beach, FL | www.standtech.com

Neil Passman | 786/664-6776 | neilp@standtech.com

Codes: 37200

Strategic Packaging Systems
See advertisement on page 95
Madisonville, TN | www.spsonline.biz
Rebekah Moreland | 423/545-9505 | 877/859-4262
r.moreland@spsonline.biz
Codes: 14300, 64300, 68000

Structural Integrity Assoc., Inc.
San Jose, CA | www.structint.com
Mike Battaglia | 704/635-0242 | 877/474-7693
mbattaglia@structint.com
Codes: 03800, 40900, 56600, 84600

Studsvik, Inc.
Atlanta, GA | www.studsvik.com/our-solutions/waste_mgmt_tech/
Bob Manseill | bob.manseill@studsvik.com
Codes: 12800, 13850, 14000, 14300, 53950, 68000, 87000, 93040

Studsvik Scandpower
Wilmington, NC | www.studsvik.com/ssp
W. A. 'Art' Wharton | 857/279-2248
art.wharton@studsvik.com
Stamps: NQA-1 Software Development, ISO 9001
Codes: 14000, 30040

Sulzer
Chattanooga, TN | www.sulzer.com
Eric Jenkins | 423/296-1919 | eric.jenkins@sulzer.com
Stamps: ASME N & NPT, NACE/NUPIC Audited
Codes: 64700, 75190

Super Radiator Coils
Chaska, MN | www.superradiatorcoils.com
Brian Elliott | 952/466-7116 | 800/394-2645
brian.elliott@superradiatorcoils.com
Stamps: ASME N, NPT & NS (Class 2 & 3); ASME S, U and UM; National Board R; ISO 9000:2015
Codes: 03000, 37600, 92300*

Swagelok Company
Solon, OH | www.swagelok.com
Please contact your local Swagleok Sales and Service Center | www.swagelok.com/en/locate-a-sales-service-center
Stamps: ASME NPT Certificate for Class 1, 2, and 3 parts, and as a Material Organization manufacturing and supplying material such as fittings.
Codes: 27450, 59800, 59850*

Switchgear Solutions, Inc.
Tucson, AZ | www.switchgearsolutions.com
Tom Scott | 520/622-1294 | 800/349-7947
thomas.scott@switchgearsolutions.com
Codes: 14000, 47400, 84600

System One
Pittsburgh, PA | www.systemone.com
Mark Fenske | 412/995-1912 | 877/505-SYS1(7971)
marketing@systemoneservices.com
Codes: 09750, 13850, 14000, 25400, 40900, 56600, 84600, 86300

Talbert Manufacturing
Rensselaer, IN | www.talbertmfg.com
Troy Geisler | 219/866-7141 x231 | 800/348-5232
tgeisler@talbertmfg.com
Codes: 86260*

Talisman Div. of Enercon
Arlington, VA | www.enercon.com
Thomas Magette | 202/471-4244
tmagette@enercon.com
Codes: 03800, 14000, 14300, 75850, 86300

T&T Enterprises
Corona, CA | www.ttenterprises.com
Brent Thalasinos | 951/340-0911
brent@ttenterprises.com
Codes: 26900

Technical Associates (US Nuclear Corp.), (Overhoff Technology Corp. Division)
Canoga Park, CA | www.tech-associates.com
Wanda Magill | 818/883-7043
wanda@tech-associates.com
Robert Goldstein | 818/883-7043
rgoldsteinta@gmail.com
Stamps: ISO 9001, CE Mark
Codes: 17950, 26080, 26230, 55040, 55060, 67380*

Technical Management Services, Inc.
New Hartford, CT | www.tmscourses.com
Robin Rivard | 860/738-2440
rrivard@tmscourses.com
Codes: 37200, 86400, 86500

Technisonic Research Inc.
Fairfield, CT
Tony Ruiz | 203/368-3600 | 800/854-7604
tonyr@technisonic.net
Codes: 56600*

Technology for Energy Corp.
Knoxville, TN | www.tecnuclear.com
Donna J. Mullaly | 865/966-5856
donna.mullaly@tec-usa.com
Stamps: ISO 9001:2015 Registered.
Codes: 03200, 21270, 22200, 40050, 56600, 91260*

Tech Products, Inc.
Staten Island, NY | www.techproducts.com
Daniel D. O'Connor | 718/442-4900 | 800/221-1311
doconnor@techproducts.com
Codes: 37130, 47630*

TEiC
Duncan, SC | www.babcockpower.com/teic/
Jennifer Pasquariello | 508/439-0146
jpasquariello@babcockpower.com
Codes: 03000, 10780, 12800, 14000, 22700, 47400, 54750, 56600, 61570, 84150, 84600, 91380

Teikoku USA, Inc. (Chempump Div.)
Warminster, PA | www.chempump.com
Jim McDaniel | 267/486-1010
jmcdaniel@teikokupumps.com
Stamps: ASME N, NPT, Classes 1, 2, 3; CAN3-Z299-3.
Codes: 64700, 64750*

Teledyne Brown Engineering, Inc.
See advertisement on page 90
Huntsville, AL | www.tbe.com
Jessica Sanders | 256/726-1385
jessica.sanders@teledyne.com
Stamps: ASME N, NPT, U, UM, NS, The National Board of Boilers and Pressure Vessel Inspectors R Certificate/Stamp.
Codes: 03800, 04000, 08800, 12800, 13400, 14000, 14300, 20300, 26080, 26100, 26910, 32250, 36000, 37200, 37600, 47400, 54750, 59850, 66280, 73620, 74150, 84150, 84600, 92300, 93040

Teledyne FLIR
Chelmsford, MA | www.flir.com/
Teledyne FLIR Sales | 987/769-9333
ugs-chelmsford-sales@teledyneflir.com
Codes: 10780, 40900, 68000, 72300

Teletrix
Pittsburgh, PA | www.teletrix.com
Michael Podobnik | 412/798-3636
mikep@teletrix.com
Codes: 86300*

Tetra Tech Inc.
Richland, WA | www.tetratech.com
Warren Baugh | 412/951-3076
warren.baugh@tetratech.com
John Gonsky | 509/372-5814
john.gonsky@tetratech.com
Codes: 37200, 86300

Thermal Engineering International (TEi)
Cerritos, CA | www.babcockpower.com/tei/
Jennifer Pasquariello | 508/439-0146
jpasquariello@babcockpower.com
Codes: 03800, 14000, 37600, 47400, 56600, 61570, 73620, 75190, 84600, 86300, 92300

Thermo Scientific - CIDTEC Cameras & Imagers (Part of Thermo Fisher Scientific)
See advertisement on page 117
Liverpool, NY | www.thermofisher.com/cidtec
Tony Chapman | 315/451-9410 | 800/888-8761
sales.cidtec@thermofisher.com
Codes: 40900, 73300, 75850, 83600, 92800*

3 Bears Technical Services, LLC
Hixson, TN | www.3bears.me
Richard Sain | 865/806-1224 | rsain@3bears.me
Codes: 14000, 20300, 93040

Tioga Pipe Supply Co., Inc.
Philadelphia, PA | www.tiogapipe.com
Jeff Shaw | 215/831-0700 | 800/523-3678
jshaw@tiogapipe.com
Stamps: ASME QSC 467; Classes 1, 2, 3 MC. Certification by ISO 9001-2015, 10CFR50, App. B., NQA-1, MIL-I-45208A Level 1.
Codes: 26900, 59800, 59850

TradeWind Services LLC
Richland, WA | tradewindllc.com
Scott Hertzel | 509/521-3864
scotth@tradewindllc.com
Codes: 13850, 14000, 25400

Transco Products Inc.
Streator, IL
Kevin Hawks | 312/896-8501
kevinh@transcoproducts.com
Codes: 26230, 37130, 93040

TRILLIUM Valves USA
Ipswich, MA | www.trilliumflow.com
Julia Henning | 978/744-5690
julia.henning@trilliumflow.com
Stamps: N, NPT, NV, ASME III, Class 1, 2, & 3; Certification by ISO 9001.
Codes: 84150, 90600, 90800, 91000, 91260, 91380*

Tri Nuclear Corp.
Ballston Lake, NY | www.trinuclear.com
Rick Russell | 518/399-1389 | rick@trinuclear.com
Codes: 10780, 27180, 27450, 41700, 72300, 77800, 83150, 90100

Tru-Motion Products, LLC
Cheyenne, WY | www.trumotionproducts.com
Anthony Suneson | 704/982-9242
info@trumotionproducts.com
Codes: 47600

Ultra Electronics, Energy
Round Rock, TX | www.ultraelectronicsenergy.com
Robert Carson | 737/231-5485 | 800/880-9333
robert.carson@ultra-nspi.com
Codes: 26970, 37130

Underwater Construction Corp.
See advertisement on Cover 4
Essex, CT | www.uccdive.com
Philip McDermott | 860/767-8256 | 800/USA-DIVE
pmcdermott@uccdive.com
Codes: 20300, 22700, 40900, 56600, 66280, 72300, 90100, 92800, 93040*

Underwater Engineering Services, Inc. (Nuclear Services Div.)
Fort Pierce, FL | www.uesi.com
Robert Walcheski | 772/337-3116 | 877/348-3837
rwalcheski@uesi.com
Al Rogers | 772/337-3116 | 877/348-3837
arogers@uesi.com
Stamps: ADCI Certified Commercial Divers, ANSI N45.2.6 Certified Inspections, ASNT SNT-TC-1A, CP-189; Certified NDE (ASME XI exams), ASME IX, XI, II Certified Welding, Coatings and Corrosion Engineers.
Codes: 10780, 11400, 14000, 20300, 20350, 22700, 26230, 27450, 40900, 47400, 56600, 73300, 73620, 79360, 83600, 84600, 86300, 92800, 93040, 93900*

Unique Technical Resources
Wayne, PA | www.uniquetechresources.com
Saeed Savar | 610/304-0904
saeed.savar@uniquetechresources.com
Codes: 03800, 12800, 14000, 18600, 63400, 84600

UniTech Services Group, Inc. (Div. of UniFirst Corp.)
See advertisement on pages 84 and 96
Longmeadow, MA | www.unitechus.com
Gregg Johnstone | 413/543-6911 x146
gjohnstone@unitechus.com
Codes: 10780, 10850, 10900, 14300, 20300, 20350, 25400, 26230, 37130, 37200, 55040, 55060, 68000, 73550, 74150, 86260, 93040, 95850*

US Ecology, Inc.
Livonia, MI | www.usecology.com
Dave Crumrine | 734/521-8032 | 800/592-5489
dave.crumrine@usecology.com
Codes: 20300, 20350, 20700, 47400, 87000

US Nuclear Corp. (Technical Associates Sub.), (Overhoff Technology Corp. Sub.)
Canoga Park, CA | www.tech-associates.com and www.overhoff.com and www.usnuclearcorp.com
Wanda Magill | 818/883-7043
wanda@tech-associates.com
Codes: 03200, 04000, 09750, 09800, 17950, 21270, 21300, 26080, 37130, 37200, 39960, 55040, 55060, 67380, 74150

Uticom Systems Inc.
Coatesville, PA | www.uticom.net
Danielle Wentz | 610/857-2655 | 800/548-5321
marketing@uticom.net
Stamps: IEEE-323; US RegGuide 1-38, ANSI N45-2. Certified incinerable.
Codes: 37130, 83110, 83120*

Utilities Service Alliance (USA)
Overland Park, KS | www.usainc.org
Jim Kitchens | 913/905-9266 | jkitchens@usainc.org
Codes: 14000

UxC, LLC
Roswell, GA | www.uxc.com
Eric Webb | 770/642-7745 | eric.webb@uxc.com
Codes: 03800, 12800, 14000, 40700, 81680, 81710, 86300*

Valcor Engineering Corp. (Valcor Nuclear Div.)
Springfield, NJ | www.valcor.com
Steve Gatcomb | 973/467-8400 | nuclear@valcor.com
Stamps: N, NPT, Classes 1, 2, 3. Certification by ANSI N45.2 App. B 10CFR50; ISO 9001; HAF 604.
Codes: 47400, 84150, 90250, 90600, 90800, 91260*

ValvTechnologies, Inc.
Houston, TX | www.valv.com
Linda Goodrich | lgoodrich@valv.com
Stamps: ASME N Stamp Authorization for Class 1, 2 & 3 valves, NPT Stamp Authorization for nuclear grade parts, ANSI N45.2, 10CFR50 App. B, 10CFR Part 21 Acceptance, NQA-1
Codes: 47400, 90600, 91000, 91260, 91380*

Vigor (formerly Oregon Iron Works)
Clackamas, OR | vigor.net
Brian Akin | 503/799-4831 | sales@vigor.net
Nicole Coons | 503/653-6300 | sales@vigor.net
Stamps: ASME N, NA, NS, NPT, U, U2
Codes: 03000, 09730, 09950, 14300, 22430, 24170, 30500, 36000, 37600, 66280, 68000, 78700, 81710, 83150, 92300

Volian Enterprises, Inc.
Murrysville, PA | www.volian.com
Harold V. Julian | 724/335-3744
volianenterprises@volian.com
Codes: 03800, 12800, 14000, 41000, 86300, 86500

Wagstaff Applied Technologies
Spokane, WA | www.wagstaffat.com
Dan Payne | 509/321-3184
dan.payne@wagstaff.com
Stamps: ASME U-Stamp, ASME NQA-1 2008 w/2009 addenda
Codes: 14300, 36000, 37600, 53950, 66280, 68000, 77800, 79360, 81710, 83150, 87380, 92300, 93900

Warrington, Inc.
Pflugerville, TX | www.warringtonusa.com
Gary Stafford | 512/251-7771
support@warringtonusa.com
Codes: 03800, 04000, 09800, 17950, 41000, 55040, 93040*

Waste Control Specialists LLC
Andrews, TX | www.wcstexas.com
Steve Ferguson | 513/560-1744
sferguson@wcstexas.com
Dan Burns | 214/662-5422 | dburns@wcstexas.com
Codes: 14300, 20300, 25600, 87000, 93040*

Waste Control Systems, Inc.
Phoenix, MD | www.wastecontrol.com
William Fannon | 410/252-9360 | 877/252-9360
wpf@wastecontrol.com
Codes: 11700, 14300, 68000

WaterWorks America, Inc.
Independence, OH | www.1water.com
Lynn Altmayer | 440/526-4815
saltmayer@1water.com
Codes: 93040

Watlow
St. Louis, MO | www.watlow.com
Richard Vlah | 314/878-4600 | 800/WATLOW2
rvlah@watlow.com
Codes: 37600, 51730*

Weldstar
Aurora, IL | www.weldstar.com
Alex Jackson | 630/849-2430
ajackson@weldstar.com
Stamps: ASME Quality System Certificate 229, ISO 9001:2015 C2020-00612
Codes: 10850, 10900

Westinghouse Electric Co. LLC
Cranberry Township, PA
www.westinghousenuclear.com
Sharon Coffaro-Vernick | 724/406-4423
sharon.coffaro-vernick@westinghouse.com
Codes: 00400, 03180, 03200, 03800, 08800, 09800, 10780, 12800, 13400, 13850, 14000, 14300, 17950, 18600, 20300, 20350, 22410, 25000, 26230, 26900, 30040, 30500, 32250, 37600, 40050, 40900, 41700, 47400, 54750, 55490, 56600, 59800, 63400, 64700, 66280, 68000, 72300, 75190, 76400, 79360, 81680, 81710, 84150, 84600, 86300, 86500, 90250, 90330, 90600, 90800, 91260, 91380, 92800, 93040, 93900*

Wheelift Transporters
Waverly, IA | www.wheelift.com
Thomas Phillips | 319/610-8761
thomas.phillips@doerfer.com
Codes: 09950, 10780, 12800, 13050, 14000, 14300, 68000, 73570, 87000

WMG, Inc.
See advertisement on Cover 3
Peekskill, NY | www.wmginc.com
Jeff Nelson | 914/736-7100 | jnelson@wmginc.com
Mark Trager | 914/736-7100 | mtrager@wmginc.com
Stamps: Approved 10CFR50 App. B QA Program, including NQA-1, Part II, Subpart 2.7. NUPIC audited and approved.
Codes: 03800, 12800, 14000, 14300, 20300, 20350, 37200, 68000, 71190, 77750, 79360, 86300, 86500, 93040*

WM Symposia
See advertisement on page 152
Tempe, AZ | www.wmsym.org
Jaclyn Russell | 480/557-0263
jaclyn@wmarizona.org
Codes: 86300

Wood (Environment & Infrastructure Solutions), (Radiological Services & Engineering Group)
Grand Junction, CO | www.woodplc.com
Jeffrey Lively | 970/243-2861
jeffrey.lively@woodplc.com
Codes: 14000, 20300, 37200, 67380, 68000, 93040

Worthington Industries
Columbus, OH | www.worthingtonindustries.com
Dave Cline | 614/840-4153 | 800/338-8265
dave.cline@worthingtonindustries.com
Stamps: Worthington has a quality system that is compliant with 10CFR50B, 10CFR71H, and NQA-1.
Codes: 14300, 68000, 83150, 92300*

Wyssmont Co.
Fort Lee, NJ | www.wyssmont.com
J. Bevacqua | 201/947-4600 | sales@wyssmont.com
Codes: 09730, 24170*

Yokogawa Corporation of America
Newnan, GA | www.yokogawa.com/us
Clayton Wilson | 678/423-2524 | 800/888-6400
clayton.wilson@yokogawa.com
Codes: 03200, 04000, 25000, 40050, 47400, 54750*

Zetec, Inc.
Snoqualmie, WA | www.zetec.com
Customer Service | 425/974-2700 | 800/643-1771
customerservice@zetec.com
Codes: 40900, 56600, 86300

Part II—Companies located outside the United States

Belgium

Nuclear-21
Waasmunster, Belgium | www.nuclear-21.net
Luc Van Den Durpel | +32473865647
vddurpel@nuclear-21.net
Codes: 12800, 14000, 20300, 20350, 68950

Saint-Gobain HTMS NV (High Tech Metal Seals)
Mechelen, Belgium | www.htms.be
Dimitri Van den Broeck | +32 15 22 02 81
dimitri.vandenbroeck@saint-gobain.com
Stamps: ISO 9001, ISO 14001, AS 9100
Codes: 75190

Canada

ATS Industrial Automation, Inc. Nuclear (Canada)
Cambridge, Ontario, Canada
https://atsautomation.com/nuclear
Paul McKenna | 519/574-5914
pmckenna@atsautomation.com
Stamps: ASME NQA-1; 10CFR50 App. B; 10CFR21 Program; CSA N285.0; CSA N286; CSA N299; CSA B51; ASME B31.1; ASME B31.3; ISO-9001:2015; ISO:13485:2016
Codes: 10780, 12800, 14000, 20300, 30500, 40900, 47400, 47600, 59850, 68000, 68950, 72300, 73620, 79360, 86130

Bot Engineering Ltd
Campbellville, Ontario, Canada
www.bot.engineering
David Bot | 905/481-0642 | david.bot@botcorp.com
Alan Bot | 905/876-4301 | alan.bot@botcorp.com
Codes: 04000, 08800, 09750, 12900, 17950, 25000, 25250, 25300, 26080, 55040, 55060

Copperleaf Technologies Inc.
Vancouver, British Columbia, Canada
www.copperleaf.com
Laura Ryan | 604/639-9700 | 888/465-5323
lryan@copperleaf.com
Codes: 12800, 14000

DB2 Consulting Inc.
Baltimore, Ontario, Canada | www.db2consulting.ca
Doug Burton | 289/251-1105
doug@db2consulting.ca
Codes: 14000, 86300

Deep Trekker
Kitchener, Ontario, Canada | www.deeptrekker.com
Andrew Lawrence | 519/504-6733
alawrence@deeptrekker.com
Codes: 10780

E.S. Fox Limited
Niagara Falls, Ontario, Canada | www.esfox.com
Frank Pepers | 905/354-3700
frank.pepers@esfox.com
Anthony DeChellis | 905/354-3700
anthony.dechellis@esfox.com
Stamps: ASME; Section VIII Div. 1; Section 3 - Class 3; B31.1; B31.3; Z299 (2, 3, 4); ISO 9001:2015; 14001; 45001. ASME N, NPT, NA, NS, U, US, SS, PP Certifications. Privately owned.
Codes: 03000, 13850, 14000, 14300, 20300, 37600, 45550, 47400, 56600, 59800, 60100, 73570, 83150, 93900*

FuseRing.com
London, Ontario, Canada | fusering.com
Paul Cheng | 519/709-2091 | info@fusering.com
Stamps: Canadian Nuclear Decommission Catalogue; U.S. Naval Submarine League - Corporate
Codes: 14300, 59800, 59850, 93900

Hoskin Scientific
Oakville, Ontario, Canada | www.hoskin.ca
Jack Vincent | 905/333-5510 | 800/665-5871
jvincent@hoskin.ca
Codes: 03200, 03800, 04000, 08800, 09750, 09800, 12800*

Kanata Electronic Services Ltd.
Toronto, Ontario, Canada | www.kesl.com
Barbara Miller | 416/745-0688 | 888/371-5375
bmiller@kesl.com
Stamps: ISO9001:2015
Codes: 08800, 13400, 40050, 41200

KEPCO E&C
Port Elgin, Ontario, Canada
www.kepco-enc.com/eng/index.do
Kai Nam | 226/453-2131 | gold@kepco-enc.com
Stamps: ASME N Certificate(N-4396) Holder, ISO 9001, 14001, 45001 Certificate Holder
Codes: 14000

Kinectrics Inc.
Toronto, Ontario, Canada | www.kinectrics.com
Lori Mignone | 416/207-6000
lori.mignone@kinectrics.com
Codes: 03800, 09800, 12800, 13850, 14000, 20300, 20350, 37200, 44000, 47400, 73620, 76400, 77750, 79370, 84600, 86300, 87000, 87380, 93040

Liburdi Automation Inc.
Dundas, Ontario, Canada | www.liburdi.com
Jason Elliott | 905/689-0734 | jelliott@liburdi.com
Stamps: CSA N285
Codes: 03800, 93900

L3Harris (Power Systems and Simulation)
Montreal, Quebec, Canada | www.L3Harris.com
Sean Bradley | 514/787-4999
sean.bradley@L3Harris.com
Stamps: ISO 9001:2015, ISO 9001:2015, ISO 9001:2015, ISO 45001 2018, ISO/IEC 27001:2013, Tickit Plus, Cyber Essentials Plus
Codes: 12800*

MarShield Radiation Shielding (Div. of Mars Metal Co.)
See advertisement on page 89
Burlington, Ontario, Canada | www.marshield.com
Kevin Milne | 905/637-3862 | 800/381-5335
kmilne@marsmetal.com
Stamps: ISO9001:2015, CSA-N299.3:16
Codes: 03200, 03800, 06950, 10900, 14000, 14300, 25600, 30500, 37130, 47400, 53950, 55490, 59800, 77750, 77800, 79360, 95750

Morson International Inc. (Morson Canada)
Toronto, Ontario, Canada | www.morsoncanada.com
Neil Smith | 519/546-7735
neil.smith@morsoncanada.com
Eric Goodman | 905/399-3742
eric.goodman@morsoncanada.com
Codes: 14000, 25400

Newman Hattersley Ltd.
Mississauga, Ontario, Canada | www.imi-critical.com
Brad Michell | 905/678-1240 x1220
bradley.michell@imi-critical.com
Stamps: ASME N, NPT; ISO 9001; N285.0; CSA Z299.2, .3, .4
Codes: 90250, 91260, 91380*

Niagara Energy Products (NEP)
Niagara Falls, Ontario, Canada
www.niagaraenergyproducts.com
Antony (Tony) Morris | 905/371-2500 x226
tonym@niagaraenergyproducts.com
Stamps: NQA-1 Compliant; Nuclear Fabrication & Welding (CSA N285.0/ASME Sec.III); Commercial Fabrication & Welding(CSA B51/W47.1/W59/ASME Sec.I/VIII/B31.1/B31.3); Quality Management System (CSA Z299.1/N299.1); Quality Management System (ISO 9001); Concrete Testing Laboratory (CSA A283 Cat.0)
Codes: 14300, 77800*

Niagara Fasteners Inc.

Niagara Falls, Ontario, Canada
www.niagarafasteners.com

Dean Zaniol | 905/356-6887 | 800/263-3602
nfsales@niagarafasteners.com

Stamps: Certification by CSAN285.0 and CSAZ299.3 & ISO 9000-2015.

Codes: 26900

Power Generation Integrated Consulting Limited (PGICL)

Etobicoke, Ontario, Canada
https://www.linkedin.com/in/vinodchugh/

Vinod Chugh | 647/575-9349 | vinod.chugh@pgicl.ca

Stamps: P. Eng. (Canada)

Codes: 14000

Promation Nuclear

Oakville, Ontario, Canada
https://www.promation.com/

Anna Masarik | 416/801-2278
masarik.a@promation.com

Stamps: CSA N285.0 - Class 1 Pressure Vessels and Fitting and Supports,NCA-3800 Material Organization, CSA B51 (ASME B31.1 and ASME B31.3),CSA B51 Section B Pressure Vessels, CSA B51 Fittings, CSA B51 Repair and Modification of Pressure Vessels and Fitting, Z299.1/N299.1, CSA W47.1 Div.2, CSA W47.2 Div.2, ISO 9001:2015

Codes: 03800, 08800, 09750, 09800, 12800, 14000, 14300, 20300, 20350, 22700, 53950, 60100, 68950, 72300, 81710, 86130, 93040

Pylon Electronics Inc. (Div. of Autrex) (Instrumentation Dept.)

Ottawa, Ontario, Canada
www.pylonelectronics-radon.com

Lise Leveille | 613/226-7920 | 800/896-4439
instrument@pylonelectronics.com

Codes: 03200, 17950, 55040, 68950, 76400

RadComm Systems Corp.

Oakville, Ontario, Canada
www.radcommsystems.com

Andrew Haber | 905/829-8290 | 800/588-5229
ahaber@radcommsystems.com

Codes: 12800, 14000, 17950, 55040, 55060

REEL COH Inc.

Boisbriand, Quebec, Canada | www.reel-coh.com

Stephan Bedard | 450/430-6500 | 800/363-6501
sbedard@reelcoh.com

Codes: 03800, 04000, 09950

SDT Ultrasound Solutions

Cobourg, Ontario, Canada | sdtultrasound.com

Robert Dent | 289/771-1313 | 800/667-5325
robert.dent@sdtultrasound.com

Ken Mitchell | 905/377-1313 | 800/667-5325
ken.mitchell@sdtultrasound.com

Codes: 03800, 21400, 40050, 40900, 47400, 54750, 84600

Sulzer Management Ltd. (Sulzer Pumps (Canada) Inc.)

Burnaby, British Columbia, Canada
www.sulzer.com

Dimitrie Cepisca | 416/213-8800 | 647/338-2705
dimitrie.cepisca@sulzer.com

Stamps: ASME Section III (Cl. 1, 2 & 3); ASME N & NPT certificate of authorization; CSA B51; CSA N285; MIL-Q-9858-A; NDT MPI/LPI/RT/UT); EN 13445; CSA Z299.1/2/3/4; Standard KTA 1401; IAEA 50-C-Q; AVS D 100/50; FRA/N/100/OL3; RCC-M; API 610, ISO 5199, ANSI/ASME B73.1; HAF 601 CL. 3; HAF 604 CL. 2 & 3

Codes: 47400, 64700, 64750

Sylvan Automation Ltd.

Oakville, Ontario, Canada
www.sylvanautomation.com

Brooke Tinkess | 905/827-1900
btinkess@sylvanautomation.com

Codes: 13600*

Tap Report

Toronto, Ontario, Canada | www.tapreport.io

Steve Buck | 416/702-9093 | 855/727-9388
stevebuck@tapreport.io

Codes: 12800, 40900, 67380, 71190*

Thorburn Flex Inc.

Pointe-Claire, Quebec, Canada
www.thorburnflex.com

John Thorburn | 514/695-8710 | 800/363-6613
jthorburn@thorburnflex.com

Stamps: ISO 9001:2015, ASME Section VIII Div. 1, ASME B31.3, ASME B31.1, N285.0, CSA B51,CSA, CNCAN, CSA N299.3

Codes: 26240, 47400*

UKM Management Consulting

Brampton, Ontario, Canada
www.digitalization-obsolescence.com

Ujjal Kumar Mondal | 647/295-3955
ujjal@rogers.com

Codes: 26240

Unified Engineering

Hamilton, Ontario, Canada
www.unifiedengineering.com/

Ed Veckie | 905/523-1700 | 800/613-2197
eveckie@unifiedengineering.com

Codes: 03000, 03800, 13700, 14300, 18600, 19450, 68000, 72300, 74350, 77800, 79360, 81710, 93900, 96200

VGSSolutions

Mississauga, Ontario, Canada

Dr. V. G. Snell | 905/824-6236
vgssolutions@rogers.com

Codes: 14000, 86300

Women in Nuclear Canada

Toronto, Ontario, Canada
www.womeninnuclear.com

Nzinga White | 416/915-3020 | 877/321-2131
canada@womeninnuclear.org

Codes: 14000, 25400

Czech Republic

METOIL

Praha, Czech Republic | www.metoil.com

Igor Voinov | +420 774 136 322
voinov@renecol.com

Codes: 00400, 14000, 68000, 79370, 86300

SKODA JS a.s.

Plzen, Bolevec, Czech Republic | www.skoda-js.cz

David Pavlis | +420 734 261 861 | info@skoda-js.cz

Stamps: Certification by ISO 9001, ISO 14001, ISO 45001, AD-Merkblatt HP0, CEFRI

Codes: 03800, 13850, 14300, 30500, 40900, 47400, 56600, 81710, 84600, 92300, 93900*

Finland

Fortum Power & Heat Oy, Nuclear Services

Espoo, Finland, Finland
www.fortum.com/nuclearservices

Anni Jaarinen | +358408257217 | +358408257217
anni.jaarinen@fortum.com

Stamps: Certification by Quality System, ISO-9001:2000.

Codes: 03800

Platom Oy

Mikkeli, Finland | www.platom.fi

Miika Puukko | +358 44 5504303
m.puukko@platom.fi

Codes: 03800, 14000, 30500

VTT Technical Research Centre of Finland

VTT, Finland
https://www.vttresearch.com/nuclear

Erika Holt | +358 20 722 4567 | erika.holt@vtt.fi

Matti Paljakka | +358 20 722 6423
matti.paljakka@vtt.fi

Codes: 04000, 08800, 11400, 14300, 20300, 26100, 41000, 53950, 58000, 67380, 68000, 68950, 75600, 86300

France

COFREND
Paris, France | www.cofrend.com
Florence Giraud | +330144190530
pole.communication@cofrend.com
Stamps: ISO CEI 17024 Standards: EN ISO 9712
Codes: 14000, 56600

EKIUM
Bron Cedex, France | www.ekium.eu
Christophe Zaia | +33 0632231705
christophe.zaia@ekium.eu
Stamps: ISO-CEFRI-QUALIFOUDRE-ISM ATEX-MASE-ASME-RCCE-RCCM-UTO
Codes: 13850, 14000

Geovariances
Avon, France | www.geovariances.com/en/
Elodie Galloyer | +33 1 6074 9090
galloyer@geovariances.com
Codes: 03800, 12800, 14000, 20350, 93040*

INGEROP Conseil et Ingenierie (a company of INGEROP Group)
Cebazat, France | www.ingerop.com
Roberto Muscetti | +33473163557
roberto.muscetti@ingerop.com
Codes: 03800, 13850, 14000

Mirion Technologies (Premium Analyse)
Norroy Le Veneur, France
www.premium-analyse.com
Steve Phillips | +33 640 89 2443
steve@premium-analyse.com
Codes: 17950, 21270, 55040

Onet Technologies (Sub. of Onet SA Marseille-France)
Marseille Cedex 09, France
www.groupeonet.com
Michel-Noel Maxime | +33491291808
+33630929497 | mmichel-noel@onet.fr
Codes: 20300, 20350, 22700, 26230, 93040

Premium Analyse
Norroy Le Veneur, France
www.premium-analyse.com
Steve Phillips | +33 640 89 2443
steve@premium-analyse.com
Codes: 03200, 17950, 55040

Rolls-Royce Civil Nuclear SAS
Meylan, France | www.rolls-royce.com/nuclear
Romain Desgeorge | +33476611617
romain.desgeorge.cn@rolls-royce.com
Stamps: Certification by ISO 9001.
Codes: 08800, 09750, 09800, 14000, 17950, 21270, 25000, 26080, 40050, 41000, 63400, 71190, 84600, 86300, 86400, 93040*

TECHWAY
Villebon sur Yvette, France | www.techway.com
Patrick Mechin | + 33 1 64 53 37 90
info@techway.com
Stamps: ISO 9001
Codes: 92800*

TRAD Tests & Radiations
Labege, France | www.trad.fr
Ghilardi Antoine | +33 06 25 95 39 38
antoine.ghilardi@trad.fr
Codes: 12800, 13850

Germany

ENVINET GmbH
Munich/Haar, Germany | www.envinet.com
Wolfgang Rieck | +49 89 45 66 57 0
info@envinet.com
Codes: 12800, 14000, 17950, 21270, 21310, 25250, 26080, 26100, 51730, 55040, 55060*

GNS Gesellschaft fur Nuklear-Service mbH
Essen, Germany | www.gns.de
+49 201 109 0 | info@gns.de
Stamps: ASME N3, ISO 9001, ISO 14001, OHSAS 18001, KTA 1401
Codes: 14300, 68000, 87000, 93040

Siempelkamp NIS
Alzenau, Germany | www.siempelkamp-nis.com
John Ferrara | 610/906-2997
john.ferrara@siempelkamp-nis.com
Stamps: Quality management according to DIN EN ISO 9001:2015; Quality assurance according to KTA 1401; Occupational safety and health management system - ISO 45001; Security-Safety-Management SeSaM Authorization to work in third-party plants or facilities (StrlschV) (German)
Codes: 14000, 14300, 20300, 20700, 27450, 53950, 68000, 72300, 79360, 83600, 86130, 86300, 86500, 93040*

Wälischmiller Engineering GmbH
Markdorf, Baden-Württemberg, Germany
www.hwm.com
Jean-Michel Wagner | +49 7544 95 14 0
jean-michel.wagner@hwm.com
Stamps: ISO 9001, ISO 14001, ISO 45001, KTA 1401, ATEX, DIN 18800-7, ISO 3834-2
Codes: 10780, 12800, 47600, 68000, 72300, 73620*

Wolfgang Waelischmiller Solutions
München, Germany | wwsol.net
Wolfgang Walischmiller | ww@wwsol.net
Codes: 14000, 20300, 56600, 68000, 72300, 75850, 77600

Italy

CAEN SyS
Viareggio, LU, Italy | www.caensys.com
Marco Locatelli | 718/981-0401
marco@caentech.com
Codes: 03200, 03800, 04000, 12800, 17950, 19700, 37130, 55040, 63400, 68000*

Campoverde srl
Milano, Italy | www.campoverde-group.com
Federico Gianni | +39 0258039052
federico.gianni@campoverde-group.com
Codes: 12800, 14000, 14300, 20700, 67380, 68950, 93040

Rogante Engineering Office
Civitanova Marche, Italy | www.roganteengineering.it
Massimo Rogante | +390733775248
info@roganteengineering.it
Codes: 14000, 40900, 56600, 84600*

SIET
Piacenza, Italy | www.siet.it
Stefano Botti | +39 0523 329017 | botti@siet.it
Fabrizio Ghizzoni | +39 0523 329048
ghizzoni@siet.it
Stamps: ISO 9001:2015; EN ISO/IEC 17025:2017 (Testing and Calibration Laboratories); 10CFR50 App. B; 10CFR21; ASME NQA-1-2008 with NQA- 1a-2009 Addenda
Codes: 03800, 09800, 14000, 47400, 53950, 84600*

Japan

Vitto Corp.
Kanagawa, Japan | www.vitto.jp
Atsumori Fujie | +81 90 6511 5482
atsumori.fujie@vitto.jp
Codes: 10850, 12800, 14000, 17950, 36000, 55490, 59800, 77800, 81710, 83150

Spain

Amphos 21 Consulting
Barcelona, Spain | https://www.amphos21.com/
Elisenda Colas | +34 93 583 05 00
eli.colas@amphos21.com
Codes: 14000

Decidia Research & Consulting
Sabadell, Barcelona, Spain | www.decidiarc.com/
François Diaz-Maurin | info@decidiarc.com
Codes: 03800, 14000, 37200, 86300, 93040

Equipos Nuclear S.A., S.M.E

Maliaño (Cantabria), Spain | www.ensa.es

María Vega | +34 942 200 142 | vega@ensa.es

Rubén Moreno | +34 942 200 142
moreno.ruben@ensa.es

Stamps: Nuclear Vessels and components, ASME Classes 1, 2 & 3: N, NPT, NA, N3, NS, S, U, U2 Stamps. AD-MERKBLATT HPO; KTA; RCCM; Certification by ISO 9001, ISO 14.001, ISO 3834, OSHAS 18001, ISO 17025

Codes: 14000, 41000*

Idom Consulting, Engineering, Architecture S.A.U.

Bilbao, Spain | www.idom.com

Xabier Ruiz | +34944797600 | xabier.ruiz@idom.com

Codes: 03800, 13850, 14000

Nucleonova S.L.

Valencia, Spain | www.nucleonova.es

Juan Antonio Muñoz Tirado | +34961130470
nucleonova@nucleonova.es

Stamps: ISO 9001, UNE 73401, 10CFR50 App. B, KTA 1401, ASME NQA-1

Codes: 12800, 14000, 37200, 84600, 86300*

Sweden

Brokk AB

Skelleftea, Sweden | www.brokk.com

Tony Marlow | 505/466-3614 | 800/621-7856
tmarlow@brokkinc.com

Codes: 10780, 13050, 68000, 72300, 73620*

ISEC Monitoring Systems

Helsingborg, Sweden | www.isec.se

Adam KP Brown | 847/287-2616
adam.brown@isec.se

Codes: 26080, 39960, 40900, 47400, 73300, 75850, 83600, 92800, 93040*

Switzerland

LEMO S.A.

Ecublens, Switzerland | www.lemo.com

Serge Buechli | +41 21 695 16 00 | 800/444-5366
sbuechli@lemo.com

Stamps: Certification by ISO 9001.

Codes: 08800, 13400

Ukraine

Radics LLC

Kropyvnytskyi, Ukraine | www.radics.tech

Anton Andrashov | +380522373328
a.andrashov@radics.tech

Stamps: QAP complies to requirements NQA-1-1994, NQA-1-2008, NQA-1a-2009, RG128 Rev. 4 Quality Austria GmbH (Certificate Registr. No. 18187/0), issued 15.09/16

Codes: 14000, 19700, 76400

United Kingdom

ATS Industrial Automation, Inc. - Nuclear (UK)

Blaby, Leicester, United Kingdom
https://atsautomation.com/nuclear

Bav Thaker | +44 0 7760 325277
bthaker@atsautomation.com

Stamps: Certifications for Cambridge, Canada facilities: ASME NQA-1; 10CFR50 App. B; 10CFR21 Program; CSA N285.0; CSA N286; CSA N299; CSA B51; ASME B31.1; ASME B31.3; ISO-9001:2015; ISO:13485:2016

Codes: 10780, 12800, 14000, 20300, 30500, 40900, 47400, 47600, 59850, 68000, 68950, 72300, 73620, 79360, 86130

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Stamps: ISO 9001, ISO 14001, ISO 45001

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Codes: 75190

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Matom Ltd.

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Rolls-Royce Civil Nuclear

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Ben Todd | nuclearsolutions@rolls-royce.com

Stamps: CSA Z299.1, CSA Z299.2, CSA Z299.3, CSA N285.0, CSA N286.2, ASME N, NPT & NS Stamps, ASME Section III (Including NQA-1), ASME U-Stamp, ASME Section VIII

Codes: 03180, 03200, 03800, 10780, 11650, 12800, 12900, 13400, 13600, 13850, 14000, 19700, 20000, 20300, 25000, 30500, 37600, 39960, 40900, 41000, 41700, 47400, 54750, 55040, 56600, 63400, 67380, 71190, 72300, 73300, 73620, 75850, 83600, 84600, 86130, 92800, 93040

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Business Developments

Williams Industrial Services Group, a construction and maintenance services company, has announced that with the transfer in ownership of the Indian Point power plant to **Holtec International**, the company has been granted an expansion of its nuclear decommissioning scope with Holtec from two units to five. Williams will provide supervision and skilled craft labor from the local union halls near Indian Point to support Holtec and its subsidiary, **Comprehensive Decommissioning International**, across a wide array of activities. Williams's work is expected to begin in the third quarter of 2021.

Deep Isolation, a specialist in spent nuclear fuel and high-level nuclear waste storage and disposal solutions, has signed a cooperative agreement with **Dominion Engineering Inc.**, which specializes in nuclear fuel services and technology with a focus on inspection and maintenance equipment designed for safety and integrity of nuclear fuel during operation and long-term storage. Deep Isolation and DEI will cooperate in the sales, development, and deployment of Deep Isolation's patented SNF and HLW disposal technology, with an initial focus on Latin America and an option to expand to other markets.

Contracts

Framatome has announced a contract award with Hungary's state-owned Public Limited Company for Radioactive Waste Management to upgrade the seismic monitoring and detaching system at its spent fuel interim storage facility in Paks, Hungary. This announcement marks the first contract signed by **Framatome Kft**, a subsidiary created following the acquisition of nuclear and process automation company Evopro Kft.

The Nuclear Decommissioning Authority, the public body in charge of cleaning up legacy nuclear facilities in the United Kingdom, has selected **Jacobs** to provide asset management solutions. Under the four-year contract, Jacobs and its strategic supplier, **PA Consulting**, will support the NDA on the implementation of its asset management strategy, applying new digital decision-making tools to improve efficiency and reduce operational costs on nuclear-licensed sites in the NDA estate.

Environmental Management

The Department of Energy's Office of Environmental Management (EM) has awarded a new contract to **North Wind Site Services** for cleanup services at the Naval Reactors Knolls Atomic Power Laboratory located in Niskayuna, N.Y. It is an indefinite delivery/indefinite quantity (IDIQ) contract from which firm-fixed-price and time-and-materials task orders are anticipated to be issued during the performance period. The contract is valued at up to $22 million over five years.

In addition, EM has announced that it has awarded the Carlsbad Field Office (CBFO) Technical Assistance Contract to **Navarro Research and Engineering**. Navarro will support EM's mission by performing technical support services at the CBFO and at the Waste Isolation Pilot Plant. This IDIQ contract will allow for firm-fixed-price and time-and-materials task orders for an ordering period of five years and a contract ceiling of $100 million.

Products

Machinery manufacturer **Brokk** has introduced a new robot to meet the extreme requirements of the toughest demolition work, the Brokk 900. The company said the Brokk 900 leverages the success and experiences of its predecessor, the Brokk 800, with reinforced design and engineering, a 25 percent increase in power, more precise operation, and a new, more powerful breaker. The improvements come with almost no increase in size and weight, the company said. The Brokk 900 comes in two different models: the standard Brokk 900 with the heaviest and most powerful breaker, and the Brokk 900 Roto-boom with a high-precision rotating boom system.

Fluor Corporation has announced that **Peter J. Fluor**, great-grandson of company founder John Simon Fluor, is retiring from the company's board of directors.

Fluor

He was the last in a long line of Fluor family members to serve as a leader within the company since its founding in 1912. Peter Fluor has served on Fluor's board of directors since 1984 in a variety of roles, including as lead independent director from 2003 to 2020.

Rita Baranwal, vice president of nuclear and chief nuclear officer at the Electric Power Research Institute (EPRI), has joined the Atlantic Council Nuclear Energy and National Security Coalition.

Baranwal

Baranwal previously served as assistant secretary for the Department of Energy's Office of Nuclear Energy. The Nuclear Energy and National Security Coalition, housed within the Atlantic Council Global Energy Center, works to address challenges present at the intersection of nuclear energy, national security, and climate change.

Master-Lee Energy Services has elected **Thomas M. Tallarico** as president following the unexpected death of former president **Louis P. Acito** in April 2021. Tallarico has served in various capacities during his 29-year career at Master-Lee, starting as an accountant, and most recently serving as chief financial officer.

Tallarico

ValvTechnologies has named **Juliana Herman** as its global marketing director. Herman is responsible for the development and deployment of ValvTechnologies' marketing strategy, product and brand management, marketing programs, communication campaigns, and market analysis on a global basis. She previously served as senior product marketing manager for Emerson.

Herman

Jacobs has seconded **John Maddison** as program director for the Industrial Solutions Hub, a new initiative that aims to tap the economic potential of companies supplying the Sellafield nuclear site in the U.K.

EFCOG

The Energy Facility Contractors Group (EFCOG), a group of more than 100 Department of Energy operating contractors that represents more than two-thirds of the DOE's total funding, wrapped up elections of its board of directors earlier this year. **Julie Baker** of the National Renewable Energy Laboratory and **Mark Peters** of Brookhaven National Laboratory were elected to the board for the first time, while **Bob Cochran** of Westinghouse and **Frank Sheppard** of N3B were elected to the board after serving terms in the past.

In addition, five executives were re-elected to the board, including **Jack Craig** of Atkins, **Tom Gioconda** of Lawrence Livermore National Laboratory, **Karen Wiemelt** of Jacobs, **Bob Wilkinson** of Hanford Mission Integration Solutions, and **Bob Miklos** of Idaho National Laboratory.

DOE

Jens Dilling has been selected as director of institutional strategic planning for the Department of Energy's Oak Ridge National Laboratory.

Dilling

Dilling will guide the development of laboratory strategies, strategic investments, and annual planning, as well as manage the laboratory's discretionary investment portfolio. His responsibilities will also include ORNL's research library. He previously served as associate laboratory director for physical sciences at TRIUMF, Canada's particle accelerator center.

NNSA

Armstrong

The National Nuclear Security Administration named **Jason A. Armstrong** manager of the NNSA Savannah River Field Office. Armstrong will provide oversight of Savannah River Site programs, nuclear operations, security, quality assurance, environment, safety and health, and the overall execution of key mission deliverables. He is a member of the Senior Executive Service. Armstrong previously served as the operations director for the Department of Energy's Office of Environmental Management in Oak Ridge.

September

Sep. 13–15—**International Conference on Decommissioning Challenges: Industrial Reality, Lessons Learned and Prospects**, Avignon, France. sfen-dem2021.org/

Sep. 15–17—**CNA2021**, virtual meeting. conference2021.cna.ca/

Sep. 20–21—**Decommissioning Strategy Forum**, Las Vegas, Nev. decommissioningstrategy.com/

Sep. 22–24—**RadWaste Summit**, Las Vegas, Nev. radwastesummit.com/

October

Oct. 3–7—**International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2021)**, Raleigh, N.C. mc.ans.org

Oct. 4–6—**International Conference on Environmental Remediation and Radioactive Waste Management (ICEM 2021)**, virtual meeting. asme.org/conferences-events/events/international-conference-on-environmental-remediation-and-radioactive-waste-management

Oct. 5–7—**ETEBA Business Opportunities & Technical Conference**, Knoxville, Tenn. eteba.org/botc/

Oct. 12–13—**TotalDECOM 2021**, Manchester, U.K. totaldecom.com/2021-expo-manchester/

Oct. 17–21—**2021 Test, Research and Training Reactors (TRTR) Annual Conference**, Raleigh, N.C. projects.ncsu.edu/mckimmon/cpe/opd/trtr/

Oct. 18–21—**10th International Conference on Nuclear Decommissioning**, Aachen, Germany. icond.de/welcome.html

November

Nov. 8–12—**International Conference on a Decade of Progress after Fukushima-Daiichi: Building on the Lessons Learned to Further Strengthen Nuclear Safety**, Vienna, Austria. iaea.org/events/international-conference-on-a-decade-of-progress-after-fukushima-daiichi-building-on-the-lessons-learned-to-further-strengthen-nuclear-safety-2021

Nov. 30–Dec. 2—**World Nuclear Exhibition**, Paris, France. world-nuclear-exhibition.com/

Nov. 30–Dec. 4—**2021 ANS Winter Meeting and Technology Expo**, Washington, D.C. ans.org/meetings/wm2021/

December

Dec. 1–3—**Perma-Fix 18th Annual Nuclear Waste Management Forum**, Nashville, Tenn. ir.perma-fix.com/upcoming-events/detail/824/perma-fixs-18th-annual-nuclear-waste-management-forum

January 2022

Jan. 11–13—**IGD-TP Symposium and Webinar: The Role of Optimisation in Radioactive Waste Geological Disposal Programmes**, Zurich, Switzerland. igdtp.eu/event/igd-tp-symposium/

Jan. 25–27—**19th Annual USA Supply Chain Winter Conference**, Rancho Mirage, Calif. usainc.org/winter-conference/

Jan. 26–28—**PowerGen International**, Dallas, Texas. powergen.com/welcome

February

Feb. 20–24—**IRPA North American Regional Congress**, St. Louis, Mo. burkclients.com/hps/2022IRPA/site/

Feb. 23–24—**8th Nuclear Decommissioning and Waste Management Summit**, London, U.K. wplgroup.com/aci/event/nuclear-decommissioning-waste-management-summit/

March

Mar. 6–10—**WM Symposia 2022**, Phoenix, Ariz. wmsym.org/


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