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UniTRACK

NUCLEAR SERVICES NEWS

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Power Upgrades and Decommissioning Needs

Demanding Best Practices for Special Initiatives

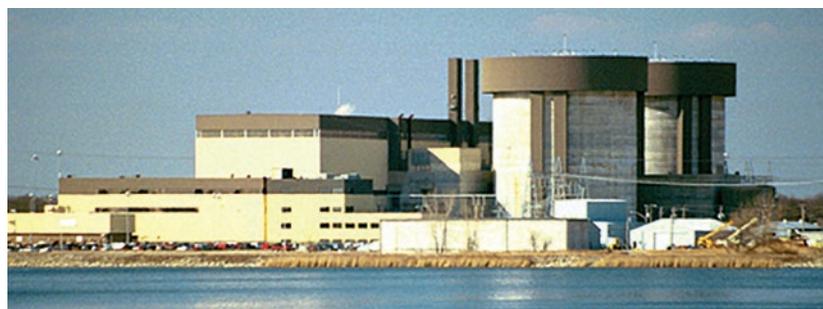
One-of-a-kind situations call for solutions intelligently designed to fit the bill. In UniTech's recent experience, two types of critical-needs situations come to mind.

Power Upgrade: Let's say the NRC approves a power upgrade for your nuclear plant, potentially demanding refueling with either somewhat more enriched uranium fuel or an increased percentage of new fuel. This allows the reactor to produce more steam so a turbine can produce more power. This upgrade has broad impact on plant systems, as noted in the U.S.N.R.C Backgrounder on Power Upgrades for Nuclear Plants:

Components such as pipes, valves, pumps, heat exchangers, electrical transformers and generators must be able to accommodate the higher power level. For example, a higher power level usually involves greater steam and water flow through the systems used to convert heat into electric power. These systems must be able to handle the increased flows.

Thus, the plant must have a work-intensive power upgrade outage.

Decommissioning: At the other end of the spectrum, facilities such as San Onofre and Vermont Yankee are in the process of decommissioning, requiring a variety of major jobs be performed. According to the NRC backgrounder on decommissioning, these include "permanent removal of such major components as the reactor vessel, steam generators, large piping systems, pumps, and valves."



Exelon's Braidwood Generating Station (Reactors 1 and 2) was among nuclear facilities recently approved for power upgrades

Facilities' Requirements and Considerations for Working Partners

Both power upgrades and decommissioning are major initiatives, but they are one-time projects. As such, they often bring with them the following understandings:

- All service, equipment and apparel needs for this project are temporary
- Having inventory left behind when the project is done is typically not desirable, since most of it will not be needed again and may in fact be a liability

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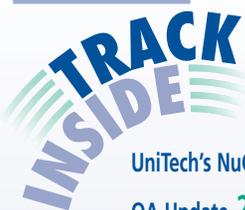
Used Frac Tanks Become an Obstacle to Top Regulatory Ratings



Don't let neglected frac tanks get between your facility and top regulatory rankings. Customers have told us that frac tanks stored onsite are becoming part of the NRC's focus during onsite inspections. There is a growing concern regarding any item that could potentially have even trace amounts of contamination. As a result, frac tanks have come under increased scrutiny. Some frac tanks are empty and have been decontaminated years ago. Some contain varying levels of radioactive material. Worse still, many tanks are rented, meaning utilities continue to pay rent until tanks are decontaminated and released.

In all cases, UniTech has the solution. We decontaminate frac tanks and release them for unrestricted use. In most cases, frac tanks are returned to owners in order to discontinue ongoing rental charges. In others, obsolete tanks are freed for re-sale/re-use or recycling. UniTech recommends that customers not delay dealing with frac tanks and rolling the dice with regulatory rankings.

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Power Upgrades and Decommissioning Needs

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- Partners in the project bring most value when they can combine an optimal blend of best pricing, best safety, best efficiency, and least demand on the nuclear facility's workforce.

How UniTech Meets These Customer Requirements (The Do, Doing, DONE Process)

Because UniTech provides most of its services during nuclear facilities' periods of highest demand (e.g. during outages or when equipment monitoring and decontamination is required) our team is seasoned in:

- Gearing up and responding quickly
- Providing sustained support for as long as it's needed
- Assuring that when we are done, customers have no unwanted inventory.

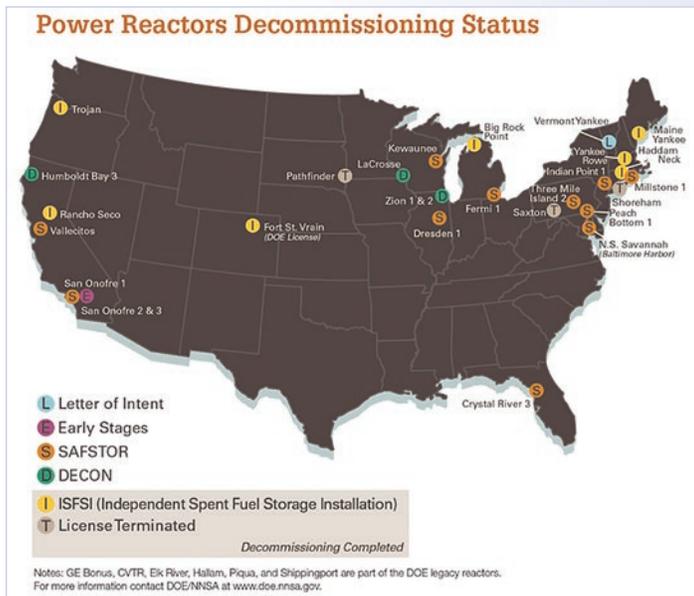


This is of course how UniTech earns repeat business, so it's imperative that we perform at the top of our game.

For both power upgrades and decommissioning, customers typically benefit from:

- A UniTech Mobile Supply Store onsite for just-in-time inventory
- The right supply of leased protective clothing (no ownership = no inventory)
- Quality leased protective equipment (again, no post-project inventory concerns)
- The world's best tool and equipment monitoring and decontamination services
- Getting used Frac tanks cleaned and off-site when the customer is done with them
- If useful, UniTech tool and equipment storage service with easy-to-access database so the customer can get items back when – and only when – they are needed.

Of course, as with any UniTech services, we customize each program to assure it is ideal for our customer's desired process. We're always ready to plan with you, so please contact your account representative or our corporate office to learn more. ■■



UniTech's NuCool Vest

Game-Changing Wearable Technology for Heat Stress

Working in hot and confined environments can create heat stress, a dangerous condition that can cause slowed reaction times, reduced energy and attention difficulties. Heat stress reduces safety, efficiency and productivity.



Now, UniTech's NuCool Vest provides a natural, comfortable solution to heat stress. Manufactured from CoolTech material with MCS Adaptive Technology, our vest lets the wearer maintain a comfortable temperature in even the most extreme heated work environments. Thanks to patented renewable phase change cooling technology, NuCool Vest remains thermally stable at 59 degrees F (15 degrees C) for up to 2.5 hours in 100 °F (38 °C).

NuCool Vest Technology and Benefits:

Phase Change Material (PCM): The term "Phase Change Material" (PCM) refers to phase changes (solidify, liquefy, evaporate, or condense). In this case, phase changes are employed to absorb or release large amounts of latent heat at relatively constant temperature. Phase change materials help maintain a product's temperature for extended periods of time.

The only "green cooling vest" on the market: We go one better. Our Renewable Phase Change Material (RPCM) is made from high-technology processed fats and oils. It is classified as "food grade" by the FDA, and carries the USDA's official BioPreferred Certification. All other PCM cooling vests use petroleum byproducts, which contain hazardous chemicals.



Convenient and long lasting: NuCool Vest recharges in about 20 minutes in ice water and is portable and unpowered (no hoses, tubes, or tethers). Plus, NuCool Vest packs have been recharged 10,000 times in our lab with no measurable change in performance.

Learn more about NuCool Vest from your account representative today. ■■

QA Update

Customer Satisfaction



The UniTech Quality Management System directs UniTech to perform customer satisfaction surveys in which we obtain and evaluate customer attitudes, UniTech general performance, operations performance, and marketing and sales performance. Our latest survey was performed in the second and third quarters of 2014. UniTech received 80 customer responses with an overall satisfaction rating of 4.3, surpassing our 2014 company goal of 4.0. Survey responders cited dependable service and radiological cleanliness as the two most important laundry services. (UniTech continues to pursue ever more advanced wash formulas for our complete line of launderable garments to further enhance the customer experience.)

All our customers are encouraged to contact their UniTech representative (be it their servicing Plant Manager, Manager, Technical Accounts, or the Corporate Quality Manager) with any inquires pertaining to service quality or any concerns. The Corporate Quality Manager can be contacted at 413-543-6911 extension 127. ■■

UniTech Prepares Candu's 2.5M-Pound Tool Set for Final Disposition

When Hydro Quebec's refurbishment project was cancelled, Candu Energy was left with an obsolete tool set for refurbishing a Candu 6 reactor. This tool set, weighing in at almost 2.5 million pounds, represented a liability that needed to be managed through final disposition. UniTech won the project to: 1) export the tool set from storage in Canada to UniTech's U.S. decontamination facilities, 2) decontaminate and otherwise demobilize the set to allow release of materials for unrestricted use, and 3) recycle as much of the material as possible. UniTech contracted to decontaminate all materials with a contact dose rate of 100mR/hour or less. Candu will receive a certificate stating that materials have been managed through final disposition.

UniTech Services Canada, Ltd. maintains a CNSC Waste Nuclear Substance License (WNSL). This license, #WNSL-W2-3800.0/2015, allows UniTech Canada to take title to materials at the customer site and then transport and export them to UniTech U.S. facilities for processing.

As of May, UniTech has decontaminated and released for unrestricted use over 1,000,000 pounds of tooling, crating and support materials.



15,000 lb. waste transfer flask (1 of 8) decontaminated and released from a Candu 6 mid-cycle rebuild tool set. 697 crates, 2.5M lbs. of UN2910 and UN2915 materials exported on 69 trucks.

UniTech Sponsors Student for Summer Nuclear Conference

As part of its ongoing commitment to developing the next generation of nuclear



energy and health physics professionals, UniTech has once again sponsored a college student for a Nuclear Energy Institute conference in August.

Bryan Gaudette, a Three Rivers Community College student in Norwich, CT, is interested in pursuing a career in health physics. UniTech will pay the costs for Gaudette to attend the NEI's Radiation Protection Forum August 2 through August 5 in Orlando.

Gaudette is in the final year of Three Rivers' Nuclear Engineering Technology program. He plans to pursue undergraduate and graduate education in nuclear-related fields. Ultimately, Gaudette hopes to combine nuclear and medicine interests to study radiological treatments for cancer.

The four-day conference will provide opportunities for networking and learning about important nuclear energy issues. The event is geared toward nuclear professionals who wish to "discuss regulatory developments; get updates on industry activities; and share operating experience, lessons learned and best practices." As an organization, NEI promotes nuclear energy and technologies internationally. ■■



Clockwise from top left: outside corner jig, flat item jig, large area jig, and inside corner jig

Hand Frisking - New Techniques

The tool set project (see article above) delivered components of many diverse (some one-of-a-kind) shapes, with significant material weight. These factors demanded hand frisking for a major portion of survey work. In response, UniTech developed the next generation of hand frisking instruments. Using electronics from our Automated Laundry Monitor and breaking the channels into groups, UniTech developed a new series of hand frisking jigs. Each jig has a wheel or spacer to keep the detector-to-item survey distance consistent; multiple detectors configured for optimum item coverage to ensure 100% of each item is surveyed; computer-controlled alarm limit that establishes scan speed with a 95% confidence level (no more listening for "clicks"); unique detector shapes to minimize areas that cannot be

adequately surveyed; and speed sensors to ensure relevant frisk rates are not too fast. These features minimize human error and optimize labor resources. ■■

Upcoming Conferences

- May 26: OPG Suppliers Day/Ajax, ON, Canada
- June 15-18: EPR/Orlando, FL
- June 22-24: PWR ALARA/Seattle, WA
- Aug 2-5: NEI Radiation Protection Forum/Orlando, FL
- Aug 9-12: Utility Working Conference/Hollywood, FL

Recent Contract Highlights

- Electric Boat, Groton: ProTech Bag Suits
- CB&I: New PO to Decon Cutting Tools
- Indiana Michigan Power, DC Cook: CoolTech Scrubs, Gloves, Mops, Signs, Consumables

- Wolf Creek: 3M Versaflo PAPR Covers
- USA Promo Sales: Shirts & Sweatshirts, Jackets, Caps
- Exelon, Limerick: GripTech Gloves, Inneralls, Tarps, Labels
- Exelon, Oyster Creek: 3M Versaflo Units, Batteries & Filters, Respirator Parts
- Exelon, Peach Bottom: CoolTech Scrubs, Glove Liners
- Exelon, TMI: FR Maxi Movers
- Idaho Treatment Group: ProTech Coveralls, MSA Lens
- Duke Energy, Oconee: New Respirator Contract, 3M Versaflo Covers & Shrouds, Cool Vests
- Savannah River Remediation: Coveralls, CoolTech Scrubs

- Westinghouse Electric, Waltz Mill: 3M Versaflo Items, DryGuard, Glove Liners, Booties
- Toyota Motor Engineering: RF Coveralls, Gloves, Hoods & Socks
- Ontario Power Generation, Pickering: Scaffolding Demobilization Contract
- South Texas Project: PO for Laundry Services (5 Year Agreement)
- USA Alliance: New 5 Year Agreement, PPE, TMD, MSS, Labor
- Bechtel Marine Propulsion: ProTech Bag Suits & Hoods
- Florida Power & Light, St. Lucie: HEPA Filter Recertification
- Exelon, Dresden: Decon Frac Tanks
- Nuclear Waste Partnership, WIPP: UniTrek Rubber Shoes
- Candu Energy: Mitchell Tritium Cartridges

Strategic New Hire



To support UniTech's commitment to providing advanced tool and metal equipment monitoring, decontamination and management (TMD) the company welcomes Brian DiFatta as Manager of

Business Development. Brian works closely with customers and their UniTech Technical Account Managers to develop and optimize TMD processes. Brian is also responsible for continually enhancing UniTech's value proposition for these critical services.

In his prior role as Vice President of Construction & Restoration Services at OAKLEAF Waste Management, Brian was a trusted advisor to Walmart, for whose needs he developed and scaled the nation's first construction waste recycling program for remodels, new construction and capital projects. Brian went on to implement this program with Target, Home Depot, Walgreens, Best Buy, and many others. The program delivered more than \$12 million in savings for customers, as well as \$11 million in rebates for previously trashed items such as scrap steel and copper.

Please contact Brian at 413-543-6911 or bdifatta@UnitechUS.com to discuss your TMD challenges. ■■

Thanks for reading UniTRACK!



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Certificate Number 968
ISO 9001, ISO 14001



UniTech Services Group is a subsidiary of UniFirst Corporation.



Used Frac Tanks Become an Obstacle to Top Regulatory Ratings

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See any frac tanks serving as oversized lawn ornaments at your site? Talk to your account representative or Brian DiFatta, Manager of Business Development, about your frac tank needs.

This Bears Repeating: From the Fall 2014 UniTRACK issue



Recent guidelines from INPO and the NRC set high standards for management of materials stored on-site. An excerpt from INPO's January 2011 Guidelines for Radiological Protection at Nuclear Power Stations sets the tone:

"Decontaminate items with removable contamination prior to storage or reuse, whenever practical. Maintain a well-supplied

tool room designated for use in the RCA, to prevent clean tools from being brought in and out of the RCA. Periodically, perform random radiological surveys of tools stored in the RCA to ensure that station contamination limits are not being exceeded."

Likewise, NRC's Inspection Manual (Inspection Procedure 84900) states that facilities storing low-level radioactive waste (LLRW) must not develop an "'out-of-sight, out-of-mind' attitude," and defines NRC's role in assuring this doesn't happen: "This will best be done by examining the licensee's record to ensure that the required surveys, inspections and accountability checks are being done and then following up with a physical examination of the storage area and waste containers/packages." ■■

UniTech UK Receives Award During SRP 2014

UniTech's UK technical account team (Account Managers Paul Chesters and Archie Montgomery) recently won the award for best exhibition at the Society for Radiological Protection's (SRP) annual conference, held in Southport, Merseyside, UK.

For the first time, SRP asked delegates to vote for the best exhibitor stand. SRP asked delegates to vote on exhibitors' appearance, technical information and product innovation. UniTech's was chosen for the award.

UniTech displayed products and services including scaffold decontamination and monitoring services, a range of respiratory protection, clothing items, and reusable tents. ■■



Darren Crosbee, plant manager from UniTech UK and Richard Willkins from AMEC, former Chairman of SRP

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