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# The New Age of Nuclear Cranes:

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Restoring Old Ideas with Innovation and Technology



## Introduction

For 50 years, American Crane & Equipment Corporation has been manufacturing high-quality lifting equipment for a wide range of industries and applications, including nuclear applications. With innovative designs and an understanding of the unique regulations and quality assurance standards in the nuclear industry, we specialize in custom solutions to meet complex needs in critical situations.

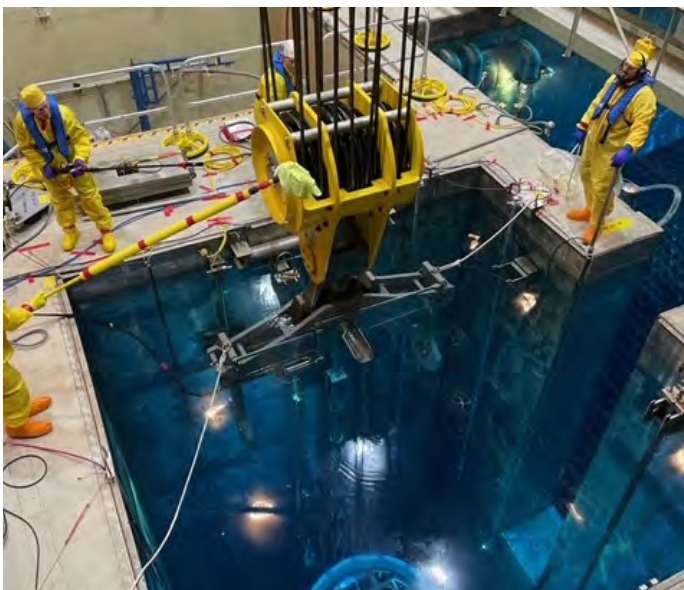


## ACECO's Experience in Nuclear

American Crane is a woman-owned business with an extensive global resume of nuclear projects for military facilities, nuclear utility businesses, various Department of Energy sites and laboratories, and aerospace companies. With a company-wide focus on the industry, an in-house engineering staff, NRC licensing experience, sufficient manufacturing capabilities, and a mature Appendix B quality assurance program, we understand the rigorous requirements within the nuclear industry and have built a reputation for creating exceptionally reliable lifting solutions. Our clients also rely on us for extensive support services, replacement parts, product testing, and more.



## Products & Equipment Suitable for Nuclear Applications



In the nuclear industry, precise, reliable solutions are essential. Anything less can have disastrous consequences, so the importance of creating failure-proof equipment with critical load-bearing capabilities cannot be understated. As a major focus within our company, American Crane has invested in specialized equipment to meet the needs of the nuclear industry. We also devote resources to the exploration and development of new products and solutions for nuclear applications, and we will continue to invest heavily in this sector to ensure we can exceed client expectations for quality, safety, and responsive service.



Here are some of the innovative solutions we have to offer our nuclear clients:

## The SAFLIFT™

The SAFLIFT™ is designed specifically for critical loads and is used for dry spent fuel processing operations. As one of American Crane's patented products, the SAFLIFT™ is built to eliminate seismic stack-up stability risk and reduce ALARA concerns.

## Additional Products

Each application is different, and we strive to provide the customized lifting and material handling solutions you need to truly meet the requirements of the application. Common products that our nuclear industry customers ask for include:

- Cask Handling Cranes
- Single Failure Proof Cranes
- Polar Cranes
- Standard Pre-Engineered Industrial Cranes
- Full Line of Industrial Hoists
- Lift Beams and Grapples
- Custom Cranes and Material Handling Equipment for Most Applications Including Nuclear, DOE Aerospace, Explosion Proof, and Single Failure Proof





## Specifications for Nuclear Equipment

Our conceptual design for single failure proof cranes allows for a capacity of up to 350 tons, and we can design and manufacture for capacities up to 1,000 tons. Our work features site-specific seismic design, triple-redundant holding brakes, two blocking protection, load hang-up protection, and more in designs that are suited for both new and existing facilities. We strictly follow industry regulations in compliance with:

- NUREG 0554
- NUREG 0612
- ASME NOG-1

## Suitable Applications

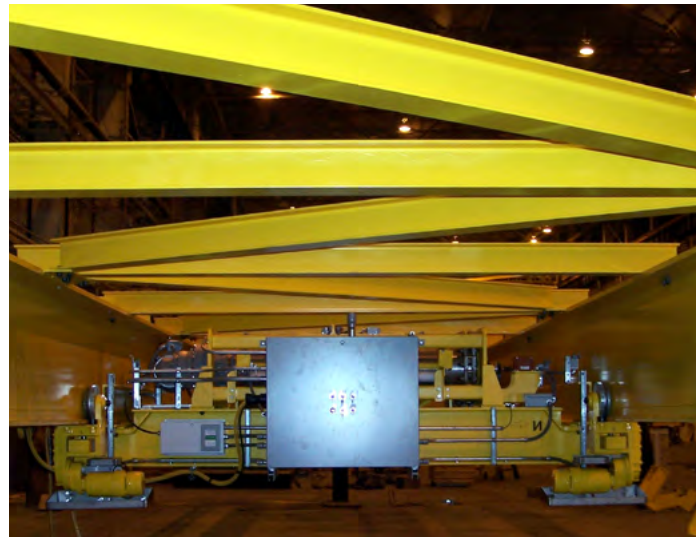
Cranes can be customized to suit unique nuclear applications, no matter your available space or the size of the load. Our cranes and load handling solutions can be used for:

- Transferring the Canister to the Cask
- Sensitive Fueling and Fuel Assembly Applications
- Reactor Head Removal and Replacement
- And More

## Safety in Design Meets Safety in Application

Safety is critical in any industry, but the nuclear industry poses additional hazards that must be considered—not only in the design of the crane but in installation and usage. A mistake or malfunction in these applications can produce disastrous results. At American Crane, we put safety first in every aspect of design and production to ensure reliable, safe operation throughout the life of the equipment.

When a product is carefully designed for the application at hand, professionally installed, and operated according to best safety practices, your company enjoys greater productivity, enhanced safety, and a sense of trust among employees for both the equipment and the leadership team. It helps you build upon a culture of safety within your company while improving operations and reducing downtime. We offer extensive quality assurances along with thorough product testing and attentive service, and we can train your team in the safe operation and maintenance of your equipment.



### Quality Assurance

Our quality assurance program has been audited by commercial nuclear utilities, NUPIC, and DOE contractors. Every aspect of our program meets industry standards and aligns with our mission to produce highly reliable lifting equipment. To ensure optimal safety, our designs meet the following quality and safety standards:

- 10 CFR 50 Appendix B/NQA-1 Quality Program for Nuclear Projects
- NUPIC Audited
- Welding Controlled to AWS D1.1 or D14.1
- SNT-TC-1A Qualified NDT Personnel
- Graded Controls Based on Customers' Requirements
- In-House Non-Destructive Testing



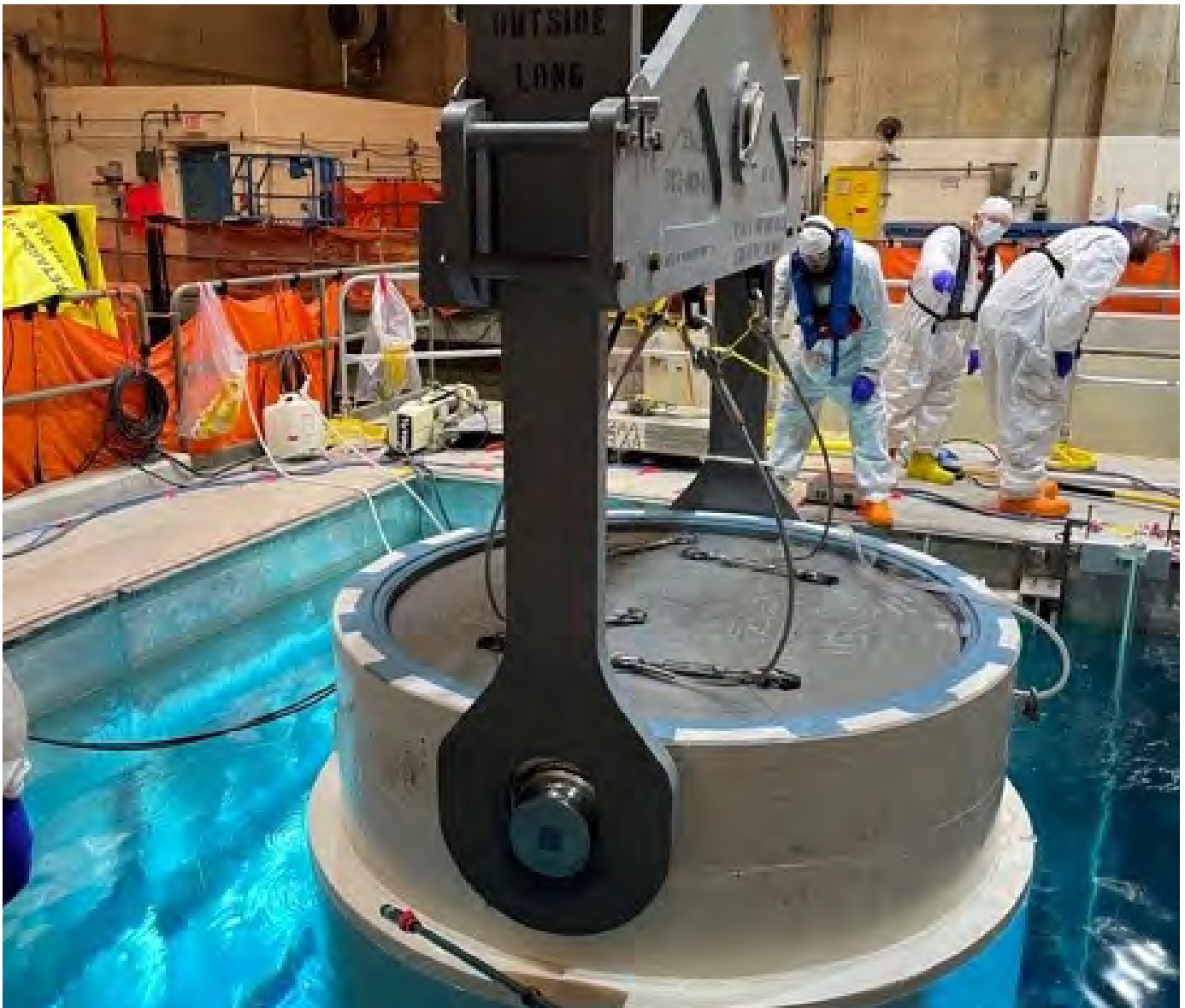
## Service

We offer a range of services to support our products. These include:

- **Load Testing.** In alignment with OSHA requirements, we offer load and operational testing for up to 250 tons. Our crane inspectors have the necessary training and experience, and our highly qualified engineers oversee the process to ensure compliance with ANSI N14.6, ASME B30.20, B30.10, and B30.16, and all relevant OSHA standards.
- **On-Site Support.** Our team can provide basic installation and operational instruction or turnkey installation, upgrades, and rebuilds, depending upon the unique skill set of your in-house team.
- **Product Support.** We offer 24/7 maintenance and repair services, and we can quickly provide any necessary replacement parts. We understand that when you've identified a potential problem or are experiencing a breakdown, there's no time to waste.
- **Plant Outage Support.** An unplanned outage at a nuclear plant can cost millions of dollars, and even a planned outage needs to proceed as quickly as possible to minimize disruption and maintain productivity. With our experience in nuclear applications, we offer plant outage crane support services with a focus on preventative maintenance and OSHA inspections.
- **Retrofit and Upgrades.** Even the best cranes will experience wear and tear over time, or your needs may evolve to the point that your current crane cannot handle the demand. We offer crane evaluation services to help you determine whether you're better off rebuilding your crane or investing in a new one, and we'll provide a detailed cost estimate for our recommendations.
- **Inspections.** Failing to meet OSHA requirements on the job site can result in costly fines or, worse, dangerous situations that put your employees at risk. Our inspection team can thoroughly examine your site to ensure it meets all OSHA requirements for safety.
- **Resident Technicians for Continuous Site Support.** Our field technicians can quickly diagnose any problems with your cranes and take immediate action to help you solve them.
- **Training.** A well-designed crane must be used properly to ensure high-level performance. We're here to teach you about your equipment and how to operate and maintain it.

## ACECO Technologies & Equipment for the Nuclear Industry

With years of experience in the nuclear industry and a team of engineers dedicated to designing innovative solutions that meet industry requirements along with the needs of your application, ACECO is proud to provide your critical overhead lifting equipment. Our extensive manufacturing and testing capabilities and thorough support services have allowed us to serve a number of nuclear operations, and we'd be happy to work with you, too. [Contact us](#) to learn more about our custom solutions, training, inspections, and more, or [request a quote](#) today.







We are your Expert, Craftsman & Partner.

Our goal is to make our customer's job easier. We provide turnkey material handling solutions for all types of industries; including nuclear, aerospace, energy, and general manufacturing. Our quality is built on depth of capabilities, with an integrated approach, in-house resources, and experience.

At American Crane & Equipment Corporation, we are uniquely positioned to provide our customers with a single source to provide the most highly engineered material handling solutions. This integrated approach includes project managers, engineers, complete manufacturing facilities and service technicians to help you with your material handling needs. Our company has a long-standing reputation as a leading supplier of quality equipment and engineering services to customers throughout the world.

**At American Crane, GRIT Matters. We are passionate about delighting our customers and put perseverance, heart and integrity into everything we do.**

**Karen Norheim**

**President & CEO**

Contact Us

Resource Library

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