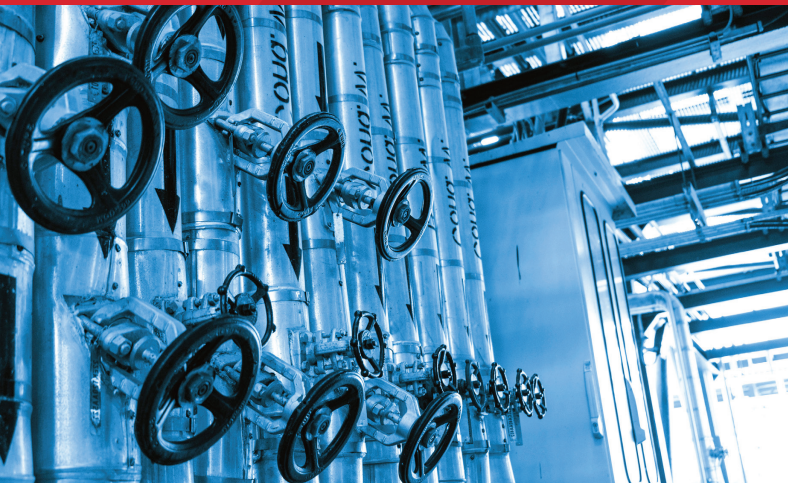


SERVICE WATER SYSTEMS



Service Water Programs

Service water systems in power generation plants cause a wide variety of problems for station engineers. This is due to the complexity and variety of system designs, water chemistry treatments, and cyclic/seasonal operations.

United Engineers & Constructors provides industry leading expertise in developing and implementing Service Water Programs to meet client needs.

United's experienced staff can assist your utility with:

- EPRI Service Water Piping Guidelines Training
- Identification and Detection of Aging Issues Training
- Procedure development
- Corrosion Susceptibility Evaluations
- Service Water Risk Ranking
- EPRI BPWORKS™ Modeling
- Fitness for Service evaluations
- Inspection planning

- Repair option selection
- Long-term Asset Management Plans
- NRC Generic Letter 89-13 Program Support
- Advanced Repair and Replacement Options

Prioritizing Resources

Utilities are under significant pressure, both internal and external, to prioritize engineering program resources while focusing on maximizing safety and operational efficiency at their plants. While many service water systems are designated as “safety-related,” “essential,” or “emergency cooling,” many other criteria must be included in determining where limited resources will be allocated.

United's team of engineers are able to develop effective risk ranking and prioritization processes that meet each client's unique needs.

Risk Ranking Methodology

LIKELIHOOD	5 Certain	Low	Moderate	High	Extreme	Extreme
	4 Likely	Low	Moderate	High	High	Extreme
	3 Possible	Low	Moderate	Moderate	High	High
	2 Unlikely	Low	Low	Moderate	Moderate	Moderate
	1 Rare	Low	Low	Low	Low	Low
		1 Insignificant	2 Minor	3 Significant	4 Major	5 Catastrophic
		SIGNIFICANCE				

**Delivering Customer Success
Through Innovative Solutions**



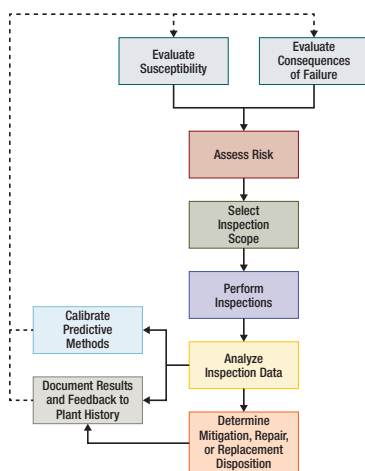
ENGINEERING SOLUTIONS FOR DEVELOPING AND IMPLEMENTING SERVICE WATER PROGRAMS

Programmatic Approach

United utilizes a robust programmatic approach in implementing a Service Water program. For piping, this approach determines the relative risk of each line or segment.

United then recommends inspections and inspection technologies appropriate for the location and degradation of concern.

Mitigation, repair or replacement can then be selected as needed.



Mitigation, Repair, and Replacement

United is a full service provider of engineered solutions for mitigation, repair, and/or rehabilitating of degraded service water piping at power facilities. Our staff has the capability to identify the root cause of problems, develop a recovery plan and implement any repair/replacement activities necessary.

In order to ensure our clients receive the optimum resolution to any corrective actions required, United is partnered with industry leaders in many different fields providing the most advanced technologies.

United provides global solutions that focus on the right fix rather than a specific product or service. This ensures our clients receive the best resolution for the situation while lessening the financial impact.

United provides engineering, materials and installation services for all service water systems including nuclear safety related applications per our approved 10CFR50 Appendix B Program.

Long-Term Asset Management

United is the industry leader in the field of Engineering Corrosion Program development. Our industry leading engineers have developed and/or enhanced Service Water and GL 89-13 programs for several utilities.

A common element of Service Water program is the establishment of an Asset Management Plan. These plans provide the road map for achieving value from physical assets by optimizing cost, risk, and performance across the asset's lifecycle. United works with clients to translate their strategic goals by into the implementation activities necessary to achieve them.

About United

United Engineers & Constructors is an industry leading infrastructure engineering, procurement, construction and consulting company dedicated to improving lives by delivering the most impactful solutions. Since 1905, we have served the power industry by providing comprehensive lifecycle services for the nuclear, conventional generation, renewable, and distributed energy markets.

Together with our clients and partners, we are unified in our efforts to deliver innovative and transformative infrastructure that is designed and built to meet the demands of today and the future.



To learn more contact

Jeremy Picard, Director, Business Development
Phone: +1 704.223.3772 | **Email:** jpicaard@aecon.com

aecon.com/ueci

