



XYLEM INDUSTRIAL SOLUTIONS

**INDUSTRIAL-STRENGTH
THINKING
SOLVES MORE THAN WATER**

COAL ASH

Complete integrated water management systems that help you control both cost and risk

Xylem delivers more value with next-generation coal ash water management.

Next-generation water management in coal ash starts with a holistic view of how your operation can run more reliably, safely, and productively. Whether you're controlling seep or dewatering a pond in order to excavate, we think about every step as part of a process versus a standalone function to help our coal ash customers design, deploy, and maintain advanced integrated solutions capable of controlling both cost and risk - and deliver the best possible outcome for coal ash water management.

BULK DEWATERING



WELL-POINT DEWATERING



DEEP WELL DEWATERING



SEEP COLLECTION



STORM WATER MANAGEMENT



DUST CONTROL AND ASH COMPACTION



LEACHATE TRANSFER



MONITORING AND CONTROLS



ENVIRONMENTAL MONITORING



PRE-TREATMENT



PIPELINE INSPECTION

We understand the role water plays in coal ash remediation. And managing it often comes with challenges.

Given the increasingly strict regulations for coal ash storage and disposal, power plant operators are under more pressure than ever to find compliant, cost-effective ways to remediate coal ash ponds. Companies that take a strategic view of coal ash remediation and water management will be able to minimize the impact these significant challenges can have on both public reputation and the bottom line. This is where Xylem stands apart. With our integrated approach to coal ash ponds, we can help you reduce both your risk and your expenses.



CONTROLLING COSTS

Coal ash remediation generates minimal revenue for a power utility, yet because it is manpower intense, it can be very expensive.

\$400-500 MILLION

is the estimated average cost per coal ash pond of the 1,227 ponds across the country ¹



COMPLYING WITH NEW REGULATIONS

Owners and operators of coal-fired power plants are under increasing regulatory and public pressure to safely remediate unlined coal ash basins.

115 MILLION

people in the U.S. rely on groundwater for their drinking water ²

1. Source: <https://www.utilitydive.com/news/duke-north-carolina-coal-ash-pond-excavation-order-to-cost-4-5b/551788/>

2. Source: U.S. Geological Survey

Working with Xylem means working with unrivaled experts.

For more than 170 years, Xylem has led the way in pumping and related technologies, including water supply, pressure boosting, industrial water management, heat transfer, treatment, wastewater and fire protection solutions. With our 24/7 field services and system engineering, we've kept mission-critical operations running reliably in everything from nuclear power plants to navy ships to mines and more. And we're ready to help you get more from your water and fluid-management systems any time with the right combination of these great brands:





Industrial-strength thinking makes a difference.

Managing the water in a coal ash pond requires more than just pumps. Which is why the country's biggest power utilities choose to partner with Xylem. With over a century of in-house engineering expertise and the world's leading family of water technology brands, we design, deploy, and maintain advanced integrated solutions that help our coal ash customers control both cost and risk. For us, coal ash remediation goes beyond offering a few key pieces of equipment and leaving you to figure out how to integrate them into your operation. At Xylem, we are committed to providing everything you need to make your job easier and your coal ash projects more efficient.

Coal Ash Remediation Experts

Xylem has been partnering with the power utility community and coal ash remediation contractors for nearly two decades - with over 500 successful projects completed. So you can trust our industrial water experts to help you customize, engineer, install, and operate complete integrated solutions.

Smart Controls

Our smart controls ensure real-time monitoring and powerful data analytics for useful insights that remove guesswork and worry from your water management system, so it can run at peak efficiency all the time with minimum manpower.

Broad Portfolio

Each coal ash site is unique, and its specific remediation process may have different requirements. With our extensive product range and applications expertise, we can design, engineer, service and support a wide range of pumps, advanced treatment equipment, monitoring and control capabilities and precision analytics to help you get the most from each and every item.

Built In-house

Because we design, engineer and manufacture all our own equipment, our in-house engineers and coal ash experts can create tailored OEM solutions that meet the exact specifications of each job site and provide seamless integrated performance. This gives you the flexibility and ability to respond to dynamic situations with the right combination of equipment and services.

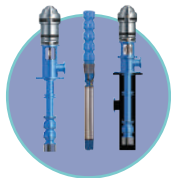
Financial Flexibility

Most of our equipment - and all our expertise - is available to rent or purchase. Whether you're trying to manage a sudden short-term emergency or a longer-term planned project, our expansive network of field offices and rental locations give you complete access to Xylem's broad portfolio of products and technologies on the terms that optimize your capital budgets and operating expenses.

Xylem solutions for coal ash:

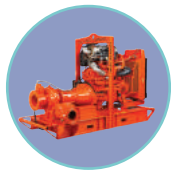
Xylem engineers the highest quality equipment and connects it in ways that reduce the need for water, energy, and people power. We offer a full range of ruggedly reliable solutions for coal ash remediation.

Pumps



Vertical Turbine Pumps

Solve complex applications with reliability, efficiency, and uptime in a wide range of uses, including corrosive/abrasive, high/low pressure and single/multistage from 50 gpm to 50,000 gpm (5" to 48" bowls sizes) and head pressures exceeding 1000ft. **Available for rent.**



Automatic Self-Priming Pumps

Get automatic priming, indefinite dry-run capability, and up to 16,500 gpm or 630 ft head for water, wastewater or industrial fluids with solids up to 5 inches in diameter. Our pumps include industry-leading advanced monitoring and control technology for total peace of mind. **Available for rent.**



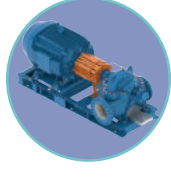
Submersible and Slurry Pumps

Xylem offers a wide range of robust submersible pumps designed to handle the toughest environments. These pumps have a modular design for different types of impellers as well as a broad material selection. Intelligent functionalities and advanced monitoring and control equipment help adapt to operating conditions in real time to deliver sustained high efficiency and long-term reliability at lower, more predictable costs. **Available for rent.**



End Suction Centrifugal Pumps

With capacities up to 5000 gpm, these multi-purpose, cost-effective, rugged end suction pumps are available in a wide range of sizes and configurations. The compact designs save space and are easy to maintain. A broad spectrum of materials and mounting options deliver quality performance specific to your application. **Available for rent.**



Single Stage Double Suction Centrifugal Pumps

With flow capacities up to 52,000 gpm and heads up to 800 ft, these pumps offer a broad range of materials and configurations to help optimize your efficiency for the most demanding industrial needs. Xylem offers custom split case pumps capable of handling up to 200,000 gpm. **Available for rent.**



Multistage Pumps

With stainless steel or cast-iron construction and multiple suction and discharge orientations, these pumps are designed to handle virtually any industrial high-pressure application including dewatering, water transport, and pressure boosting applications, delivering flows to 2600 gpm and 3100 ft TDH. **Available for rent.**

Brainpower: For Rent



We design, engineer and manufacture our own equipment. And we rent it, too. Whether you need a fast-track, temporary fix or cost-effective long-term solution, we can help keep your operation up and running with efficiency, reliability and peace of mind. www.xylem.com/RentalSolutions

Packaged Pump Systems



Booster Packages

Our pre-configured variable speed pressure booster packages provide maximum value, proven reliability, superior energy efficiency and better system protection in one solution with standard operating pressures up to 300 PSI and flows to 2100 gpm. **Available for rent.**



Packaged Pump Stations

These packages include all necessary components for quick, easy setup and operation. Smart controllers assure reliable, optimized performance and our unique patented self-cleaning pump sump design minimizes fat and sediment build-up for optimized performance.

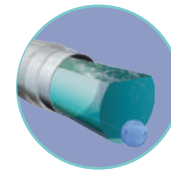
Treatment Products & Systems



UV and Ozone Treatment Systems

Highly-efficient UV and ozone oxidation systems provide chemical-free and environment-friendly solutions for source water and wastewater treatment that are suitable for a wide range of applications.

Monitoring, Analytics and Controls Solutions & Services



Pipeline Integrity Management and Monitoring Solutions

Condition assessment, leak detection and monitoring tools give operators the information they need to extend the useful life of their pipelines while improving safety and reliability. Our best-in-class technology and services provide the data you need to cost-effectively focus resources with precision.



Advanced Monitoring and Controls

Get unmatched knowledge of your operations through analytics, monitoring, drives and controls that removes guesswork and worry. A vast suite of intelligent solutions and connectivity that can be tailored to your needs and specific to your application.



Water Quality and Quantity Instrumentation & Sensors

Our premium laboratory, field, portable, and online instrumentation measure water velocity, flow, discharge, currents and waves, while our sensors, instruments, software, and data collection platforms make environmental water quality monitoring and testing easy. **Available for rent.**

The best products are only half the reason to work with us.



Our people make the difference

Industrial-strength thinking helps us design and manufacture the highest quality pumps and related equipment. But that's not all. We apply the same dedication and expertise to every aspect of our relationship with you. Our responsive 24/7 field services and custom engineering capabilities are what makes Xylem the right choice for your coal ash remediation and water management solutions.

Our expertise solves the challenge

Nobody spends more time thinking about coal ash remediation. Xylem has been partnering with power utilities and coal ash remediation contractors for nearly two decades - with over 500 successful projects completed. So you can trust our industrial water experts to help you customize, engineer, install, and operate complete integrated solutions.



Total peace of mind

Maybe you need help deciding whether to refurbish or replace existing equipment. Maybe you need to find a way to lower operating costs or troubleshoot an issue. Maybe you want to outsource maintenance and upkeep. Or maybe you need a flexible way to pay for new equipment. Whatever you need to support your industrial water and fluid management process, we do it. Our portfolio of services will give you total confidence in your system 24/7.

Industrial-strength parts & support

Xylem designs equipment for reliability, longevity and low total cost of ownership. That said, there will come a time when routine maintenance is necessary to maintain peak performance. Genuine Xylem parts ensure optimal, reliable performance of your Xylem equipment and can be delivered directly to you or with technical support. If you prefer to handle upkeep yourself, we have you covered:

- 24/7 field support
- Custom engineering
- Operator training
- Equipment service training
- Technical coaching
- Genuine parts kits



Committed to solving water

The facts speak for themselves: worldwide, 844 million people lack access to clean drinking water. 443 million school days are lost to water-related illness. 361,000 children under 5 die from diarrheal diseases every year.* And 90% of natural disasters are water related. It's clear the world is facing unprecedented water challenges brought on by population growth, urbanization, shrinking fresh water supplies and increasing storm severity.

At Xylem, we take our role as leaders in water and fluid management seriously and are committed to finding solutions to the world's most pressing water challenges. Our mission is to provide and protect safe water resources for communities in need around the world, and to educate people about water issues.

To learn more about Watermark, our corporate citizenship and social investment program, visit xylemwatermark.com

*Source: UNICEF/WHO

Industrial-strength thinking solves more than water.

For over 170 years, Xylem has led the way in water and fluid management. We can analyze, customize, engineer, and install a complete solution that will help you focus on your core business, build profitability and solve complex challenges the right way. Give us a call to see what industrial-strength thinking can solve for you.

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to [Xylem.com/coalash](https://www.xylem.com/coalash)



Xylem Inc.
[xylem.com/industrial](https://www.xylem.com/industrial)

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