

## WesTech Solves Complex Evaporation Challenges for a Large Southwest U.S. Utility

### Mobile Solution Evaporates 20 Million Gallons of Water Annually to Keep Power Utility in Compliance

#### Location

Southwestern United States

#### Owner

Power Utility Company

## Problem

A regional power utility provider was unable to secure permits from the city, county, and state to dispose of water through deep well injections or discharge it into a river. Over the years, the power plant was decommissioned, but the company is still working to close its ash pond, a process that has been hampered due to issues from rainfall.

The challenge was significant because the ash pond was reaching unsafe levels. Evaporation was the only treatment and disposal option. If the ash pond overflowed, the company would face steep fines and potential legal action from regulators and the community.

One option used at other utility companies – internal recirculation of materials – did not work because solids contact clarifiers were ill-suited to the chemical composition of the water to be treated. This, along with the timelines and constraints of the work, meant the power utility company needed a partner with end-to-end solutions that included process expertise.

## Solution

WesTech explored every pathway to solve the evaporation challenge. The company's process expertise in external solids recirculation and commitment to responsive services were essential to helping the power utility address the problem and avoid fines and community issues.

Although the power plant was decommissioned, the utility company had amassed a mountain of ash – the highest in the county – that was pushing its ash pond to capacity. WesTech stepped in with four FLASH evaporators as a temporary solution and rapidly deployed the systems to manage the excess water to meet regulations.

One thing that distanced WesTech even further from competitors bidding on the project was its knowledge that softening would be required before the evaporation process. One competitor conducted a pilot that likely failed due to unsoftened water blinding the evaporator units.

In response, WesTech deployed solids contact clarifiers in front of the evaporators to enable processes to run flawlessly from the first day. As the project evolved, WesTech also began treating leachate by adjusting its equipment as needed.



Four FLASH units were temporarily deployed to manage evaporation issues and stabilize pond capacity until the full systems were online.



WesTech Solids Contact Clarifiers placed in front of the evaporators to remove solids buildup and enable a continuous process.

## Results

With its expertise and end-to-end solutions, WesTech proved the advantages of its services over other rental companies, engineering specialists, and other options the utility provider considered. The demanding project highlighted WesTech's skill in understanding project details, such as identifying the correct pipe and pump sizes, which processes could be automated, the hydraulics and equipment required, and the best way to assemble it all.

In the end, two solids contact clarifiers pumping toward the FLASH units worked perfectly thanks to chemical injection, proper sequencing, programming, and real-time adjustments to address changing conditions.

WesTech's expertise enabled the company to deploy a high-performing system in time to prevent further issues with the company's ash pond levels, leachate, and more. The team took the time to fully understand the utility provider's challenges, build a reliable solution with readily available equipment, and ensure it functioned properly to meet changing environmental and regulatory conditions.

The company is now on track to hit its goal of evaporating 20 million gallons of water annually.

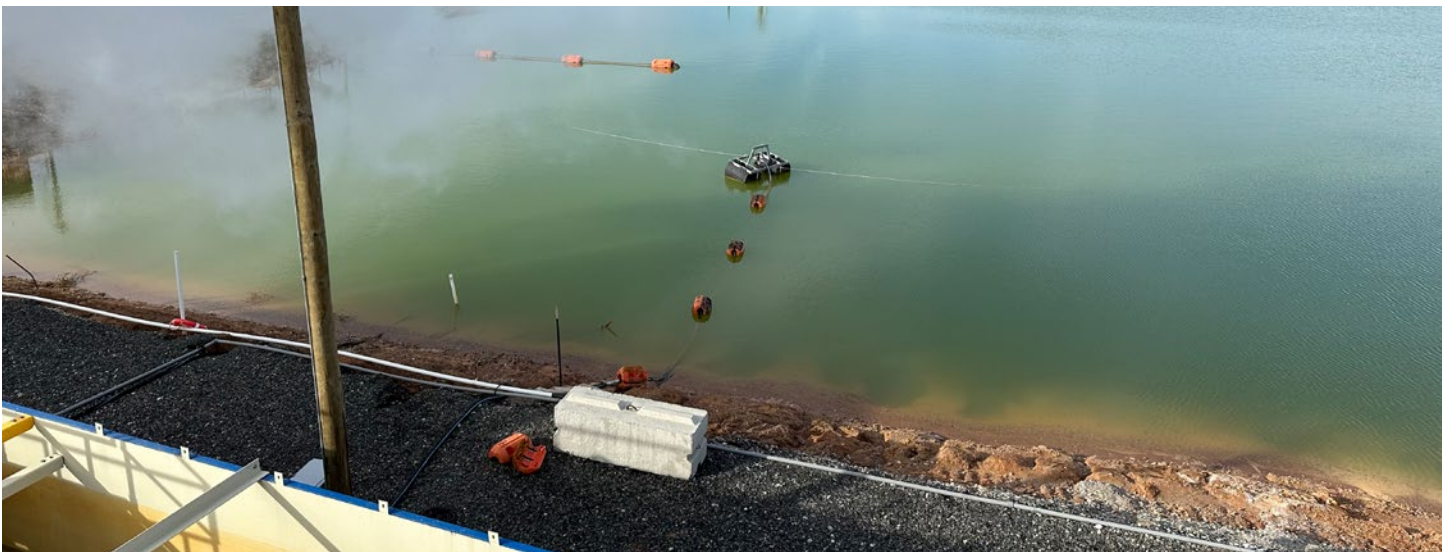
## Highlights

- Evaporated 50-60 gallons per minute with 0 solids discharge
- Had functioning solution in place within 8 weeks of signed PO
- Helped utility company achieve goal of treating 20 million gallons per year
- Prevented potential fines and environmental issues



## Solutions Summary

- Process Engineering
- Rental
- Operations
- Lab Testing



Ash pond showing elevated levels due to rate of ash disposal and heavy rainfall.

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