

A custom bulk dewatering system for 100% compliance

AN ADVANCED INTEGRATED SOLUTION TO CONTROL BOTH COST AND RISK

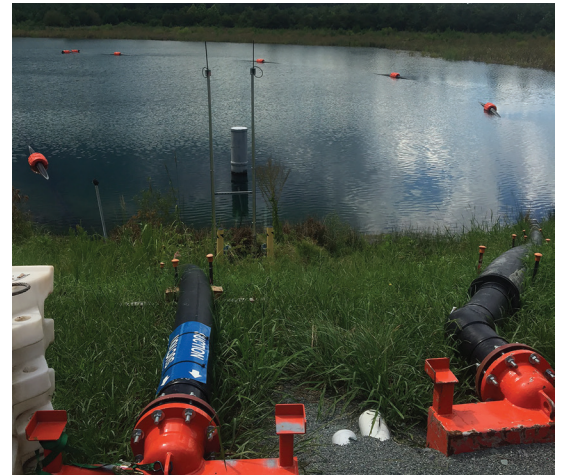
Challenge

A major North American power utility needed to dewater ash ponds at old sites without permanent power. To ensure compliance with state permits as well as company ash pond procedures, several variables had to be monitored including TSS and PH limits. Water levels could not drop more than 12" a week and had to stop before 3.5' of remaining water was left in the basin. Before a limit was exceeded, alarms needed to be sent out and the system had to be shut down automatically. All of this needed to be monitored continuously during operation and data recorded automatically and retained for record keeping requirements. The system also needed to run for a 12-18 month minimum period in all kinds of weather.

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Solution

With our integrated approach, Xylem engineers created a modular system that combined different products into a single streamlined solution. A Godwin custom control panel with an HMI (human-machine interface) was used to handle all of the inputs required and provide control and communication to the Godwin diesel pumps. A solar skid provided power to the custom control panel and eliminated the need for a generator - which reduced operating costs. And MJK magnetic flowmeters provided record of the volume of water being transferred, while the YSI TSS and PH probes ensured water quality of the effluent. The custom control panel also provided the required data recording and storage this project demanded, as well as remote viewing of the system run status while it was operating.



Floating HDPE suction line along with recirculation lines utilized along with Godwin road ramps to keep pond access road open.



Due to space limitations, Xylem engineers designed a pad layout incorporating a common suction line for this particular site application.

PRODUCT LIST:

- Godwin CD Series Automatic Self-Priming Pumps
- MJK Flowmeters
- YSI TSS and PH Sensor
- Godwin Custom Control Panel with solar panels
- Level Transducers

Result

Xylem's custom control panel with solar skid reduced the need for multiple operators onsite to constantly monitor multiple variables and eliminated any incorrect decision or action that could have resulted in regulatory issues or fines. Because all these products were manufactured and rented by Xylem, there was complete integration of the different equipment interfaces together with the necessary engineering cross product support to ensure reliable operation. To date, bulk dewatering has been completed at multiple sites without a single permit violation.

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