VEYRA

Purity by Design.

CASE STUDY

Modernizing Wastewater at Russian River Brewing Company

Project Type: Food & Beverage, Controls & Automation
Location: Windsor, California

HIGHLIGHTS

Operational control restored by eliminating rigid, vendor-locked automatic system shutdowns.

Seamless hardware transition to a standardized, non-proprietary Allen-Bradley control platform.

Secure remote access via industrial VPN gateway, drastically reducing emergency site visits.

SECURING OPERATIONAL FLUIDITY

As an iconic craft brewer, Russian River Brewing Company relies on precise operations to keep its legendary beers flowing. Managing the high-strength wastewater from production requires a dependable Membrane Bioreactor (MBR) system. Faced with an unreliable, vendor-locked control system at their Windsor facility, the brewery partnered with Veyra to modernize their infrastructure, protecting operational continuity and ensuring long-term compliance.

CHALLENGES FACED

- **Design & Programming Limitations:** The original MBR control system locked operators out of critical process settings and alarm limits. Rigid automatic programming would frequently interrupt the treatment process without operator approval, such as triggering an un-abortable Clean-in-Place (CIP) cycle and halting operations during a routine membrane differential pressure alarm.
- **System Support Restrictions:** The existing PLC and HMI software applications were completely proprietary, leaving Russian River with zero local support, unavailable programming files, and extreme difficulty finding qualified local technicians.
- **Operational Risks:** Running equipment independently for optimization or troubleshooting was highly cumbersome, while obsolete hardware posed escalating security risks to the brewery's digital infrastructure.



SOLUTIONS IMPLEMENTED

- **Hardware Modernization:** Disassembled the legacy Siemens infrastructure and integrated a standardized Allen-Bradley platform, including a CompactLogix PLC, upgraded 19" PanelView Plus 7 HMI, and PowerFlex VFDs.
- **Enhanced Electrical Protection:** Added Hand-Off-Auto (HOA) switches for direct local motor control and line reactors to improve drive protection.
- **Software Optimization:** Custom PLC and HMI software leveraging proven BLU|BOX control strategies. Built user-driven graphics using the brewery's preferred color conventions, giving operators full visibility of the MBR process from a single screen.
- **Connectivity & Integration:** Programmed unified Ethernet/IP communications across all components and deployed an industrial VPN gateway for secure remote troubleshooting and monitoring.







OUTCOME AND IMPACT

- **Operator Empowerment:** Brewery staff gained complete access to all process setpoints, manual equipment controls, and alarm limits, entirely eliminating the problematic, disruptive automatic actions.
- **Vendor Independence:** Transitioning to a standardized platform erased the brewery's dependence on restrictive proprietary vendors, giving them the freedom to utilize any qualified local service provider in the future.
- **Rapid Troubleshooting:** Secure remote access enables immediate off-site controls support, slashing emergency onsite response times and maintaining uninterrupted plant uptime.

This project transformed a legacy operational hurdle into a flexible, cutting-edge advantage. By deploying an open-architecture, user-driven control system, the brewery moved past vendor lock-in to achieve control over their water treatment data and performance. This project highlights Veyra's ability to adapt complex engineering solutions to active production facilities, ensuring critical infrastructure supports, rather than hinders, world-class manufacturing.

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info@goveyra.com 4616 W Howard Lane, Suite 105, Austin, TX 78728 goveyra.com