

VEROBLUE AQUACULTURE

WEBSTER CITY, IA, USA

AGRICULTURE

OVERVIEW

This project started out with a vision to create an innovative aquaculture system that is favorable to both fish and the environment, based in America's heartland. This proprietary, leading-edge process uses the natural elements of air, water, and care with several premium species of fish. The fish grown in this aquaculture system allows VeroBlue to offer the most wholesome eating experience to fish lovers worldwide.

PROJECT DETAILS

Reliable Controls Authorized Dealer FM Controls, Inc., completed this unique, new construction project for VeroBlue—the first urban fish farm of this scale ever built.

The facility consists of five barns, each containing 48, 10,000 gallon tanks. Each barn has a heating water system, ventilation system, aeration system, filtration equipment, water supply system for the fish tanks, and a power metering system. Each barn also includes a standalone mechanical system with redundant equipment (pumps, fans, etc.) and a 300 kW emergency backup generator. In addition to the mechanical systems for the barns, a 100,000 gallon water treatment plant is controlled and monitored.

The redundant backup equipment is designed to maintain water and aeration to sustain the fish health in event of equipment failure. Equipment failures of greater than 15 minutes put the fish health in jeopardy and the sustainable losses would be financially catastrophic.

The Reliable Controls equipment installed includes nine MACH-ProComs, one MACH-ProWeb, 74 MACH-ProPoints, 16 MACH-ProViews, and five SMART-Space Controllers. BACnet® integration includes nine Modbus interfaces with generators, six BACnet power meters, two BACnet interfaces to gas detection, and two BACnet chillers.

Because this project was the first of its kind on this scale, it presented multiple challenges during construction. The tropical operating environment of the equipment and controls required many special sensors and monitors to effectively operate the facility. After substantial testing of five barns, the owner's intention is to build an additional 10 more barns in the future.

To learn more about projects using Reliable Controls® visit
www.reliablecontrols.com/projects/overview



PROJECT TYPE:
New Construction

INSTALLATION TYPE:
Boiler, Chiller, HVAC, Laboratory, Lighting, Power, Water Monitoring

TOTAL AREA:
25,084 m² (270,000 ft²)

NETWORK:
BACnet, Ethernet

POINTS:
1,200

EQUIPMENT INSTALLED:
 9 MACH-ProCom™
 1 MACH-ProWeb™
 74 MACH-ProPoint™
 16 MACH-ProView™
 5 SMART-Space Controller™

RELIABLE CONTROLS® DEALER:
FM Controls, Inc.

www.reliablecontrols.com