



A Rockwell Automation Company

Midwest Food Products Inc. Water Management

The Client:

Midwest Food Products Inc. located in Carberry, Manitoba, (40 kilometers east of Brandon) is a corporation controlled by Nestle Canada Inc. and Simplot Canada Limited. Midwest Food's main

product is French fries, potato patties and powdered potato flakes for customers such as McDonald's and Wendy's.

The Requirement:

The existing water wells and recharge system were not adequate to provide a sufficient quantity of process water to the plant. It was decided to construct a new recharge trench with water provided from three wells located four kilometers south of the plant. Not only does this provide water to recharge the old wells but it eliminates the problem of a rising water table to the south of the plant.

For environmental purposes, the water level of the supply wells and the amount of water pumped must be measured and recorded.

Operators also wanted to be able to start and stop pumps remotely from existing Wonderware terminals.

The Design Solution:

A small Ethernet-based PLC was installed inside the remote pump house. FVNR starters for the three pumps were controlled by the PLC via a manual selector switch on the PLC panel or by Wonderware from any of the terminals in the plant, four kilometers away.

A Momentum M1 960-20 controller was chosen because of its small size and its Ethernet communication port.

A fifty-six foot mast was erected next to the pump house. Atop the mast we installed a Yagi directional antennae. A 2.4-gigahertz Ethernet modem was connected to the antennae and the

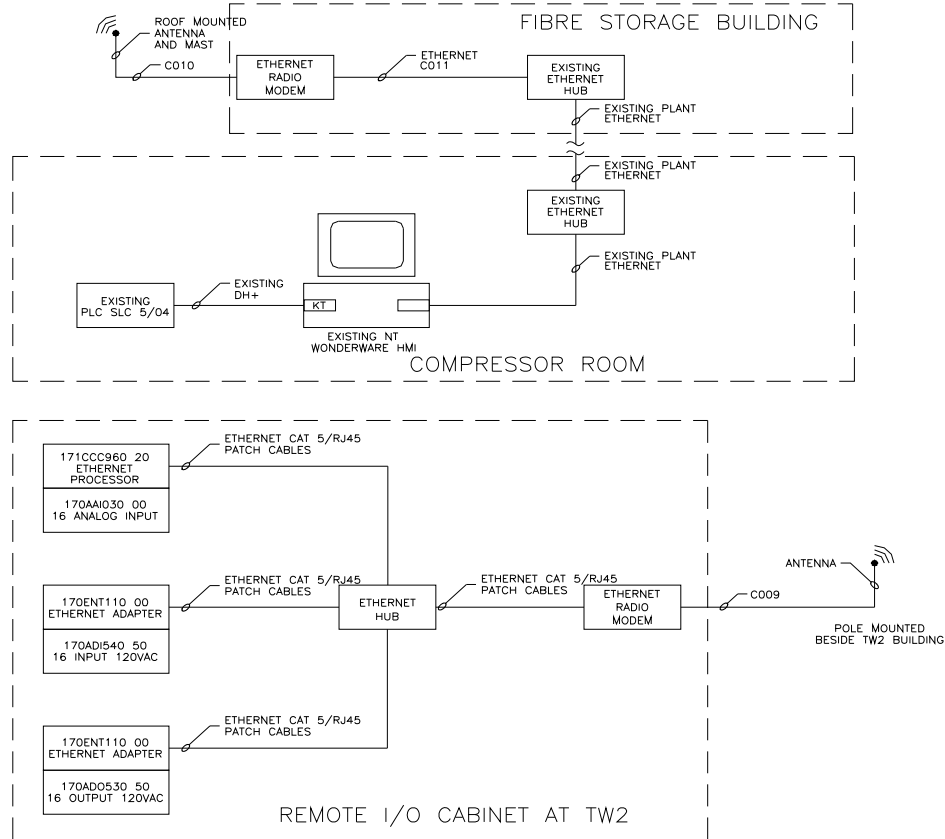
PLC for receiving commands from the plant based Wonderware stations.

At the plant site a similar antennae was set up on the roof of a storage building and connected to a similar modem. This modem is located in a switch cabinet and connected to a switch port on the plant Ethernet network. The TCP/IP address configured in the PLC can be polled directly from the Wonderware Tag Server.



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System Specifications:

- (1) 171 CCC 960 20 Momentum Controller
- (1) 170 AAI 140 00 16 point analog input
- (1) 170 ADI 540 50 16 point Input
- (1) 170 ADO 530 50 8 point Output
- (2) 170 ENT 110 00 Ethernet adapter
- (1) 4 Port Ethernet Hub
- (2) 2.4 Giga hertz Proxim RangeLAN II Radio Modem
- (2) Yagi #7031 directional antennae

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com