NAME OF THE PROJECT
New plant for production of value-added compounds obtained through a refined extraction process of alfalfa

FIELD
Food

LOCATION
Province of Quebec

YEAR OF ACHIEVEMENT
2021-2022

Context
To demonstrate the concept and test the production capacity of the refined extraction, our client built a new smaller scale plant.

Mandate
The PCI team was involved in electrical engineering, programming and integration of all the plant's equipment.

The plant contains, among others, the following equipment: extraction presses, heat exchangers, dryers, centrifuges, conveyors as well as tanks, valve matrix and three-line CIP skid.

Tasks performed
- Revision of functional analysis
- Electrical design of control panels
- Design of network and control architecture
- IT server purchases and configuration
- SCADA server-clients configuration and deployment
- SCADA programming
- Factory Talk Historian installation and configuration
- PLC programming
- Supervision of the electrical installation
- Start-up and 24/7 support
- Redaction of user's guide manual

Solutions provided by PCI
- Third party equipment integration
- Complete functional analysis and programming of three-line CIP skid on site
- Mobile pressing plant and CIP in the field
- Configuring IT environment for the plant operations
- SCADA design using high-performance techniques (ISA 101)
- PLC and SCADA coordinated template integration (Plant PAX)
- Uninterruptible Power Supply (UPS) to maintain product integrity in the event of a power failure

Tools and methods used
- Project management
- AS-i Network Architecture
- Allen-Bradley ControlLogix Process controller
- Allen-Bradley Compact GuardLogix SIL2
- SCADA and Historian FactoryTalk View SE
- Emerson PLC and HMI
- UPS integration