

ADM provided detail design, PLC programming, integration and documentation for custom control hardware used in the processing of potash for PotashCorp New Brunswick's Picadilly operation.

Our client's goal was to develop a distributed control scheme using Rockwell Automation's ControlLogix PLC platform in various process sections which would be fully integrated to the mine site's Emerson Delta V DCS system.

ADM provided detailed design to complete the concepts for control cabinets provided by our client. Constraints for the control cabinet design included minimal available electrical room space in which to locate the cabinets and incorporation of equipment vibration monitoring instruments which were not intended by the OEM to be cabinet mounted. Having completed the hardware and wiring designs, ADM managed the construction and testing of the control cabinets at a local assembly shop in order to ensure delivery of the equipment in coordination with installation contractor and DCS vendor project schedules.

ADM developed PLC program applications for the ControlLogix processors based on process narrative descriptions provided by our client. The PLC program was structured to utilize custom add-on instructions based on unique motor groups. Communication protocols used between the PLC processor and its remote I/O racks was ControlNet and from the PLC to the DCS was industrial Ethernet. ADM worked closely with the DCS vendor to seamlessly integrate the ControlLogix PLC system with the DCS platform.

ADM final deliverable to this project was a completed documentation set that include equipment drawings and schematics, program copies and a detailed narrative of the system logic.

