

Title: Vitasul Fertilizer Plant 217,00 MT/Yr. Keyera

Date: 2014-2015

Scope: Field Engineering and Commissioning Support

Location: Alberta, Canada

About Keyera.

Keyera (TSX: KEY) is one of the largest midstream oil and gas operators in Canada. The company services oil and gas producers in Western Canada and transports natural gas liquids such as propane, ethane, butane, condensate and iso-octane to markets throughout North America. Keyera operates within the midstream sector of the industry meaning that it isn't focused on the production or refining of petroleum. Instead, Keyera serves customers by providing them with the means to store and transport various oil, gas and NGL products.

Executive Summary:

The Keyera Vitasul facility located in Strachan, Alberta is a Rapid Release Sulfur (RRS) fertilizer pellet manufacturing facility, capable of manufacturing 210,000 metric tons per year of pelletized fertilizer. The micronized fertilizer is produced using proprietary technology developed by Sulvaris. Keyera is Joint Venture (JV) partner with Sulvaris (50/50) with Keyera operating the facility.

The facility consists of five major process areas:

- Homogenization and Filtration
- Liquid Additive Preparation
- Batch Weighing, Mixing & Feeding
- Pelletization
- Drying, Cooling, Product Storage & Load-Out

Vepica's scope on this project was to perform FEED and Detail engineering, procurement, constructability analysis, field contracting and logistics of a fertilizer pellet manufacturing facility

Challenges:

The plant was the first ever to be designed and constructed using applied technology. This presented many challenges, in the form of studies, to apply existing equipment to a new application, and designing packages with vendors to be applied to atypical conditions.

Vepica Solutions:

Vepica had taken over the scope from another firm outside of the plant's geographical location, and as such, made improvements to reduce capital costs, considering the region in which it was built, during the detailed engineering.

To the same end, Vepica incorporated its value engineering practices; applying more practical, mechanical solutions typically found in the agriculture industry, rather than completely adhering to earlier recommendations. These actions resulted in meeting the construction schedule to condense labor hours, and save capital costs on materials and equipment.