

PROJECT NAME

AMMONIUM SULPHATE TRACK HOPPER REPLACEMENT

PROJECT DESCRIPTION

Sherritt International, at its Fort Saskatchewan facility, proposes to install a new ammonium sulphate track hopper as an upgrade to the existing system. The track hopper and conveyor system were originally installed in 1953. Modifications occurred in mid-1965 and the mid-1970's. Sherritt completed the original design to unload bulk feed materials in the amount of 500 MTPD, of various feed concentrates, into a grade level hopper with transfer to storage bins. The original design featured delivery of fines and other materials by rail into the grade level hopper. The system now services exclusively for metering ammonium sulphate to the leach process using tandem trucks (~7 per day).

Gemini completed a Front End Engineering Design (FEED) study to specify the nature and type of modifications that are to be made to the existing ammonium sulphate handling system. The modifications proposed were in part developed cooperatively with the client, whereby Gemini critically evaluated each with respect to the criteria established by the team. The objective is to have the new bulk handling system eliminate the storage and handling of ammonium sulphate in the Feed Shed through the addition of a bulk unloader system to feed ammonium sulphate directly to the storage bins.

SCOPE OF WORK

Sherritt International Corporation contracted Gemini to provide engineering support for the installation of a new and more efficient bulk material handling system, for the safe and efficient transportation and storage of ammonium sulphate. As part of this request, Gemini was tasked to develop a scope of work, cost estimate and schedule to allow Sherritt to make an informed decision regarding funding and approval.

Specific work activities undertaken by Gemini in the development of a cost estimate and scope of work (engineering/construction plans) were as follows:

- Evaluation of past project and site information in view of establishing the design criteria and construction plan
- Evaluation of site conditions in view of identifying important design considerations and construction activities as it relates to:
 - o Storage bins for particulates, material packing and tank seal
 - o Future screening and delumping
 - o Belt conveyor system
 - o Removal of redundant facilities
- Installation of a new, mobile bulk material handling system for tie into Conveyor #4
- Removal of the Ammonium Sulphate Track Hopper in the Feed Handling Shed, associated equipment and redundant facilities