Specialty Adhesives and Chemicals Division currently operates four plants worldwide that produce fluorochemicals using electrofluorination technology. These fluorochemicals are the base of a business with a total annual worldwide sales of $400,000,000 in 1989.

The electrofluorination process produces an off-gas stream that contains hydrogen, HF, and various perfluorinated short chain hydrocarbons. This off-gas stream is currently controlled by passing it through a series of refrigerated condensers and scrubbers to capture as much of the stream as possible. Despite this effort, approximately 3.5 million pounds per year worldwide of fluorine containing compounds are lost to the atmosphere.

On February 5, 1988, the Cordova plant was granted a construction permit for the 12 electrochemical cell expansion. This permit was granted based on several conditions. One condition was that 3M agreed to construct a Pilot Plant to evaluate incineration and recycle of cell off-gas. 3M is required to report the progress of the Pilot Plant to the Illinois E.P.A. annually.

This same condition was included in the construction permit for the two electrochemical cell expansion issued on October 18, 1988, also for the Cordova plant.

To comply with these permits, a pilot facility is being constructed at the Chemolite plant.

In addition to complying with the E.P.A. Permit, several benefits will be achieved. First, this facility has been sized to handle the off-gas streams from all the cell systems in Building 15. At full production, this unit will return 330,000 pounds of HF to the cell systems resulting in a savings of about $180,000 per year. Second, the facility will also be used to dispose of a large stockpile of no-use inert by-products. And finally, this facility will provide valuable knowledge that will be required for installation of similar units on the cell systems in Decatur, Cordova, and Antwerp, should it become necessary due to increasingly stringent E.P.A. regulations.