CleanAir

CASE STUDY

Compound Characterization at a Paper Mill

Background

CleanAir was contacted by an international paper company to help determine the composition of a gas stream. There was limited understanding of the compounds that would be present and CleanAir was tasked with determining the optimal strategy for characterizing the gas stream.

CleanAir's Approach

CleanAir utilized the technical expertise of its engineers to formulate a test plan that would meet the data quality objectives of our client. Multiple sampling techniques were utilized in order to process the flue gas in various ways to tease out the compounds of interest. CleanAir primarily utilized gas chromatography (GC) and extractive Fourier transform infrared (FTIR) spectroscopy but other methods were utilized as well. Safety concerns added a layer of difficulty as the gas stream was at both high temperature and high pressures. CleanAir drew upon years of testing at difficult locations such as fluidized catalytic crackers, chemical plant process lines, and municipal solid waste plasma melter exhausts to determine a safe and effective way to access the flue gas.

Results

CleanAir's was able to safely characterize the gas stream and provide quality data to our client. This program was successful enough that multiple facilities were tapped in an effort to improve our client's understanding of the process in regards to varying process streams.

Summary

Compound Characterization at a Paper Mill.