

To D.J. Emery; c.c. A.K.C.  
From H.E. Pawson  
Subject Stack Tests 1974 Series

Date October 18, 1974  
Ref.

Stack sampling tests conducted on June 10, 1974, June 17, 1974, July 25, 1974, and September 13, 1974 were performed incorrectly.

I became concerned after returning from vacation and discussed the test results with A.C. He was upset about the results but could offer no reason since he was doing the tests as he had been shown by M. Lane.

I contacted the mine inspector and asked if they had the talent available to check out our method. As a result, J. Knight of the Mines Branch at Elliot Lake arrived here in September in conjunction with some other studies.

He accompanied A.C. up the stack to check out our method. After a very short time he returned with the answer.

It would appear that an incorrect hook up on the draft gauge used in calculating gas velocity was the source of error. A.C.'s hook up was providing static pressure only which in turn gave an exceedingly high gas velocity. Mr. Knight claimed this would introduce a 50% error in the velocity.

If this is true, then it would be quite in order to assume another 1.5% collection efficiency conservatively speaking.

Thus, for the September 13, 1974 stack test total collection efficiency would be 95.59% rather than 94.09%.

Stack tests taken this year are generally low because of the numerous interruptions to operation experienced this year. It takes hours to get the Cottrell up to operating temperature after a shutdown and quite frequently operating temperature is not achieved before the next stoppage. Needless to say this affects stack emissions.

Something never before experienced has come to light this past year in the Baghouse. Orlon shrinkage has literally made all compartments terribly inefficient. This shrinkage is directly attributable to the stoppages.

This test is the last of the series unless weather improves.

*H.E. Pawson*