

To W. Moore; G. Aaltonen

Date October 26, 1977

From K. Morton

Ref.

Subject RECENT BAGHOUSE DEVELOPEMENTS.

On October 18th, we conducted a stack test to determine the effectiveness of extending the interval in the shaking cycle. The shaking mechanism was completely shut down for a period of 5 hours which effected a pressure drop increase from 1" to 2.4". #7 baghouse compartment was isolated as the bags were due for replacement. This compartment has since been left isolated and will not be used until fresh bags are installed.

The stack test was conducted successfully at near 100% isokineticity and the results are very encouraging. Total arsenic emitted was .0065 grains/scf or about 36 lbs/day. One interesting aspect was the complete reversal of proportions of solids as vapour as compared to previous tests. Capowokis' tests of 1975 showed 90% total As collected on the filter and 10% collected in the impingers. Our latest test showed <10% collected on the filter and <90% collected in the impingers. This indicates that very few solid particles are passing through the bags and a lower baghouse temperature will have a far greater effect than previously when arsenic vapour was only a very small portion of our total arsenic emissions.

A beneficial side effect of extending the shaking cycle interval is the increased life of the wearing parts of the shaking mechanism. A 45 minute cycle as at present means each compartment is shaken approximately 11 times per shift. Increasing the interval to 4 hours will improve the life of the mechanism by approximately 550% which means 11 years between overhauls rather than 2 years as is the present situation.

For this reason, I recommend taking no action regarding modifying our baghouse as proposed by Fuller Co. or replacing our baghouse as proposed by Standard Havens.

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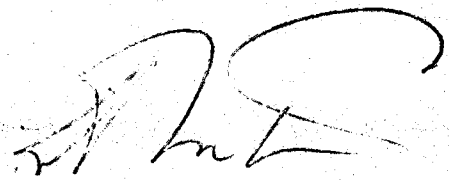
Subject..... Baghouse continued.

The dust suit has been tested and approved by the operators in the baghouse area. Two more suits have been ordered and these should greatly reduce the arsenic exposure hazards experienced in the past.

A timing device has been ordered for our shaking mechanism which will allow simple adjustment of intervals between shaking cycles. This should arrive and be in service by mid November.

If all goes as anticipated, the new opacity monitor will not be as effective as previously planned. Opacity monitors are about as sensitive as the human eye therefore if there is no visible stack emissions, the instrument will give a reading of zero. It will still be of benefit as a broken bag detector and it will indicate gradual bag deterioration.

A further stack test is planned for next week to confirm the very encouraging results obtained.

A handwritten signature in dark ink, appearing to be 'J. L. L.' or similar, located at the bottom right of the page.