

To. W. A. M.; K. M.

Date. October 26, 1977

From. C.Q.O.

Ref.

Subject. ROASTER STACK TEST ( ISOKENETIC TESTING)

SAMPLING DATE: October 18, 1977

AMBIENT TEMPERATURE	-	34°F
STACK TEMPERATURE	-	197°F
DRY GAS VOLUME	-	47.553 cubic feet
MOISTURE CONTENT	-	7.21%
STACK GAS VELOCITY	-	10.19 fps
STACK VOLUME	-	27,390 s.c.f.m.
TOTAL PARTICULATE WT	-	.0040 gr/scf
TOTAL ARSENIC WT	-	.0064 gr/scf
ARSENIC TO FILTER & PROBE	-	.0006 gr/scf
ARSENIC TO IMPINGERS	-	.0058 gr/scf
PARTICULATE EMISSION RATE	-	.9438 lb/hr or 22.65 lb/day
TOTAL ARSENIC EMISSION RATE	-	1.5109 lb/hr or 36.2608 lb/day
ARSENIC PARTICULATE EMISSION RATE	-	.1504 lb/hr or 3.6100 lb/day
ARSENIC VAPOUR EMISSION RATE	-	1.3605 lb/hr or 32.6508 lb/day
% ISOKENETIC	-	99.31%

The above stack test was run on an experimental test involving the baghouse. On the morning of October 18, 1977 at 0820 hours the shaking cycle to the baghouse was turned off and compartment #7 closed (due to poor bags). This procedure would enable us to develop a pressure drop of 2-3 inches across the bags within a few hours. The few hours turn out to be 6 hours, attaining a pressure drop from 1" up to 2.25". At that pressure drop (2.25") stack sampling was begun, and the test ran for 80 mins. in which the baghouse pressure drop had increased to 2.75". After the test was completed the shakers were turned on and it took 1 1/2 hours for the baghouse pressure drop to reach 1" again.

From data attained above there is a notable difference in the particulate emission, it is lower but, the arsenic to the impingers (vapourous arsenic) stays relatively the same as compared to the previous test of October 6, 1977 (.0052 gr/scf). Therefore by having particulate control the emission of arsenic as a particulate is greatly lowered. (Oct.6/77 arsenic filter & probe .0128 gr/scf.