

MEMORANDUM

TO: S.El-Alfy
CC: S.McAlpine, K.Blower
FROM: K.Morton
DATE: June 6, 1988
SUBJECT: RPC PILOT TEST RESULTS

RPC has finally got their plant in operation and early indications are very encouraging.

After modifications to the reactor feeding apparatus, continuous operation was begun at 2 AM, June 5th and 31 hours later was still looking good.

During the initial 31 hour period, 266 kg of baghouse dust was fed to the roaster and approximately 150 kg collected in the cold baghouse. It is assumed that the remainder is in process, perhaps as a scale formation in the condenser. Material balances are scheduled during the coming week and a normal in process balance will be determined.

As testing progressed, the hot baghouse product became increasingly darker brown and the cold baghouse product lighter white until now it is almost pure white. Assays will be performed on both products and samples will be returned to Giant for analytical confirmation.

Operating temperatures have been approximately as follows:

windbox below tuyeres	820 deg C.
roaster bed	470
condenser outlet	180
cold baghouse inlet	150
cold baghouse outlet	130

Scrubber solution has not been analyzed but there is little doubt that some As₂O₃ will escape to the scrubber unless the cold baghouse is operated at around 110 deg C. Unfortunately, the condenser pressure drop rises if additional cooling air is added to bring cold baghouse temperature to target level.. Condenser design seems to be the problem and it is possible that arsenic is condensing out on cold surfaces. Modification will probably be required.

The initial run is expected to treat 11 drums of dust weighing about 1300 kg and is tentatively scheduled to be completed sometime Friday, June 10. They will not operate during the weekend but will resume testing on Monday, June 13.

