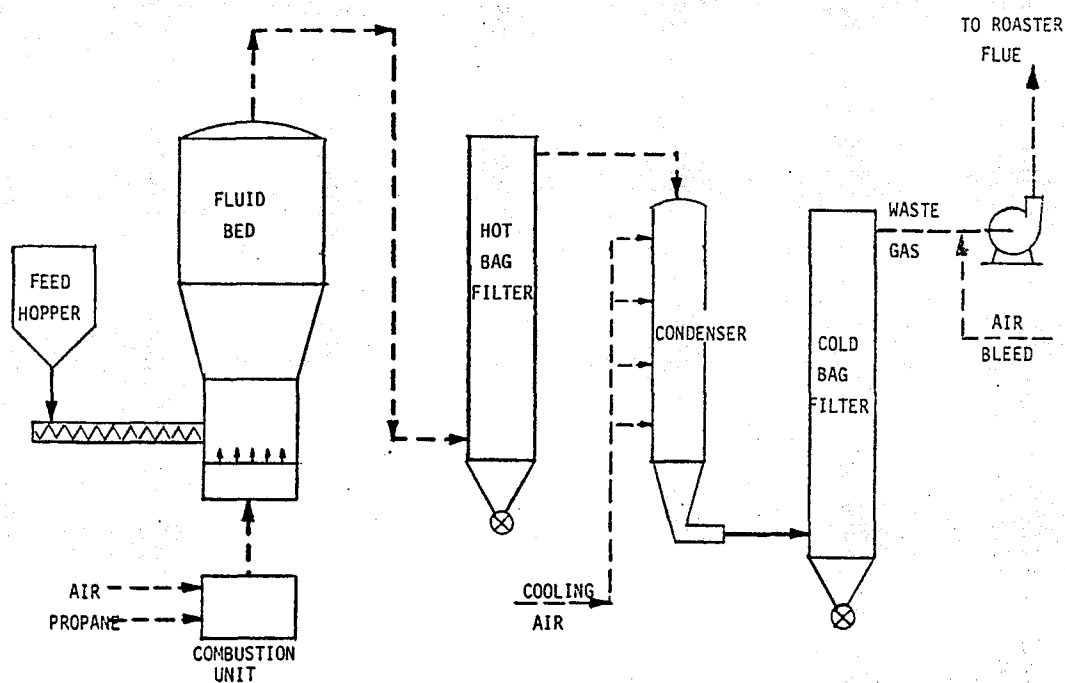


APPENDIX C

- 1) Pilot Plant Flowsheet
- 2) Estimated Pilot Plant Development Cost

APPENDIX C

FIGURE C1 - PILOT PLANT FLOWSHEET



Approximate Operating Conditions

Feed Rate - Baghouse Dust	40 kg/Hr.
Air to Combustion Unit	15 scfm
Propane to Combustion Unit	0.52 lbs/Hr.
Fluidryer off gas volume @ 400° C	40 cfm
Cooling Air to Condenser	70 scfm
Waste Gas @ 150° C	125 cfm

Temperatures: Combustion Chamber	800 - 900° C
Fluid Bed	350 - 400° C
Hot Bag Filter	325 - 375° C
Cold Bag Filter	150° C

Table C 1 - Estimate of Pilot Plant Development Cost

1) <u>Equipment:</u>	<u>\$ Can</u>
Screw feeder with hopper (Armstrong-Jones)	7,000
Fluidizer with electrical heaters to compensate for heat losses and insulation	4,800
Hot bag filter - one bag with one spare	4,300
Condenser	2,000
Cold bag filter - 4 bags with 4 spares	2,200
Combustion unit	2,000
Exhaust fan	2,500
Miscellaneous instruments, valves etc.	<u>7,000</u>
Total equipment	31,800
Design, procurrment - 500 man hours @ \$25/Hr	12,500
Installation	<u>30,000</u>
Total	74,300
Say	<u>75,000</u>
2) <u>Operating Cost:</u>	
Assume: 25 weeks of operation - 5 day week	
6 men to operate - 3 shifts	
2 men for analytical and shop services	
1 professional to supervise and analyse data	
Cost: Payroll - 8 technicians @ \$500/week	100,000
- 1 professional @ \$1000/week	25,000
FML assistance - 12 man weeks @ \$1000/week	12,000
Head office assistance	12,000
Travel and other misc. expenses	<u>5,000</u>
Total operating cost	154,000
3) <u>Estimated Total Cost:</u>	
Equipment and construction cost	75,000
Operating cost	154,000
Contingency	<u>33,000</u>
Total Cost	262,000