



**Request For Capital
Expenditures/Retirements**

REPORTING CLASSIFICATION B2	DATE APPROVED 4/17/83	JOB ORDER NO. PP-5835
SUMMARY OF AMOUNTS		
DESCRIPTION	LOCAL CURRENCY	U.S. DOLLARS
ESTIMATED PROJECT COST		\$10,099
DISMANTLEMENT EXPENSE		
TRANSFER EQUIPMENT		
GROSS AMOUNT FOR APPROVAL		\$10,099
LESS TRANSFER EQUIPMENT		
LESS SALVAGE OR TRADE-IN ALLOWANCE		
NET CASH REQUIRED (GOF-3027)		\$10,099

DIVISION OR COMPANY
Polymer Products Division

LOCATION
Chicago Plant

J.O. CONTROL POINT
097

JOB TITLE
Install dual oil and gas burner
for large kiln.

RETIREMENT DATA		ECONOMICS as called for in General Procedure Memo #3 Attachment C. (Attach calculations)		REVISION DETAIL (GROSS AMOUNTS)			
	AMOUNT			REV.#	DATE	AMOUNT	CUM. AUTHORIZATION
COST		ECONOMICS PERIOD	6 yrs.	1			
DISMANTLEMENT		NET SALES		2			
LESS SALVAGE		NAT (PROFIT/SAVINGS)	2,078	3			
		TOTAL INVESTMENT		4			
		% ROI (ON TOTAL INVEST.)	21.4%	5			
		INTERNAL RATE OF RETURN		6			
TOTAL - CHARGE RESERVE		PAYOUT OF NEW FIXED CAPITAL	3.37 yrs.	7			

DESCRIPTION AND REASONS REQUIRED

Funds of -----\$10,099
are requested to purchase and install a dual oil and gas fired burner
for the large kiln.

*Closed
2/85*

SUMMARY OF ESTIMATED COST - Details on GOF-3027		ESTIMATE NO.	STARTING DATE One week after approval	COMPLETION DATE 3 months after approval	
ITEM NO.	DESCRIPTION	MATERIAL	LABOR	ENGINEERING	TOTAL
	See Attached				
NET CASH REQUIRED		6764	3135	200	10,099
ACCOUNTING TREATMENT		APPROVALS			
ITEM NO.	DEPR. RATE	NAME		DATE	
	Dr. \$9,721 P. P. & E. (2A320) Dr. \$ 378 Expense as incurred	7 1/4%			
		PROJECT SPONSOR <i>L. Johnson</i>		<i>9/30/82</i>	
		<i>Joe Jeffrey</i>		<i>9/30/82</i>	
		<i>R. Alwood</i>		<i>10/14/82</i>	
		<i>Sam Salati</i>		<i>4/11/83</i>	
ACCOUNTING TREATMENT / ECONOMICS APPROVED BY DIV. CONTROLLER (CHECK BOXES) ☒ <i>BSA</i> ☐		DATE <i>10/16/82</i>			
POST AUDIT PERIOD		POST AUDIT DUE DATE			
		DIVISION PRESIDENT/DIRECTOR			

Proposed Work and Cost

Funds of -----\$10,099
 are requested to purchase and install a dual fired oil and gas
 burner for the large kiln.

Present Situation

Litharge, the major material used in the manufacture of all
 lead heat stabilizers, is produced by the oxidation of lead.
 First, partial oxidation in a ball mill, then completed in an
 oil fired kiln. At current production demands, 150 gallons per
 day of a low sulfur kerosene is used to heat the kiln. Sulfur
 is a contaminant in lead stabilizers, hence the need to burn a
 low sulfur fuel. The current price of oil is \$1.37 per gallon
 with a BTU content of 14×10^4 per gallon. The cost of gas is
 \$0.47 per therm with a BTU content of 1×10^5 per therm.

Justification

Per Mr. T. E. Necekas energy survey of April 20, 1981:

Oil cost for running kiln	\$46,373
Cost if kiln were run on gas	\$12,652
Difference	\$33,721

Using a mixture of 3/4 oil and 1/4 gas, a savings of \$8430
 per year could be obtained.

1981 Data

Oil cost for running kiln (1981)	\$35,411.76
Cost if kiln were run on gas (1981)	\$17,009.30
Difference	\$18,402.46

Using a mixture of 3/4 oil and 1/4 gas, a savings of \$4600.61
 per year could be obtained.

<u>Year</u>	<u>Litharge Produced</u>
1979	14,037,479
1980	6,236,170
1981	6,295,398

Safety and Loss Prevention

The existing large kiln has no combustion safety controls. Potential explosion
 hazards will be greatly reduced. The new dual fuel burners (one oil, and one
 gas) shall be equipped with combustion safety controls in accordance with
 Cyanamid's Loss Prevention Standard No. 310.0 and The National Fire Protection
 Association (NFPA) Standard No. 85A-1982. The procurement of the dual fuel
 burner will be specified in accordance with these standards.

N14600.01

Details of Proposal

The present oil burner will be replaced by a dual fuel burner capable of using both oil and gas. This burner will burn a ratio of both oil and gas, the ratio of each depending on the length of flame desired. The kiln is a fire brick lined 6 foot diameter by 60 foot long rotating tube which must be heated its entire length. A gas burner alone cannot achieve a long enough flame to heat the entire length of the kiln to the required temperature. With the addition of oil to the gas burner, the entire length of the kiln can be heated much more economically than with oil alone, since gas is much cheaper to burn for equal amounts of BTU. Installation will be done by outside contractors. This burner system has been reviewed by corporate chemical group loss prevention and safety groups.

Production Factors

This proposal will not alter product quality or production rates.

Contingent Future Commitments

This proposal will not require additional funds to complete.

Alternatives Considered

Keep present system which burns oil only. Rejected as too costly.

Risks

No operating risks are involved.

Concise Summary

Install a combination oil and gas burner on the kiln to save on energy costs and improved safety.

10/22/82

ECONOMIC JUSTIFICATION
CHICAGO PLANT

	<u>1st Year</u>	<u>Subsequent Years</u>
Gross Saving using Natural Gas	18,402	18,402
Less: 3/4 mixture of Oil	<u>13,802</u>	<u>13,802</u>
Net Annual Savings	4,600	4,600
Less: Costing Depreciation @ 7 1/4%	705	705
Taxes	<u>378</u>	-
Net Savings Before Taxes	3,517	3,895
Taxes @ 50%	1,759	1,948
Investment Tax Credit	972	-
Net Savings After Taxes	2,731	1,947
Costing Depreciation	<u>705</u>	<u>705</u>
Cash Flow	3,436	2,652

Payout $\frac{9,721 - 3,436}{2,652} = 1 + 2.37 \text{ (3.37) years}$

ROI 6 year average $\frac{2,078}{9,721} = 21.4\%$

COMMERCIAL FACTORS

This order supports a plant budget for lead stabilizers as follows:

(K\$/lbs.)	<u>Sales</u>		<u>Marginal Income</u>		<u>POS</u>	
	<u>Lbs.</u>	<u>\$</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Budget all stabilizers 1982	6,900	5,451	2,586	47.4	1729	31.7
Actual all stabilizers First seven months	2,456	1,779	934	52.5	436	24.5
Litharge First seven months	193	64	(23)	-	(26)	-