CYANAMID

Request For Capital Expenditures/Retirements

REPORTING CLASSIFICATION	DATE APPROVED	JOB ORDER NO.
	1/18/85	PP-1111

DIVISION OR COMPANY: Polymer Products

LOCATION: Chicago Plant

J.O. CONTROL POINT: 097

JOB TITLE: Purchase and install a 10 inch Extructer.

SUMMARY OF AMOUNTS

DESCRIPTION	LOCAL CURRENCY	U.S. DOLLARS
ESTIMATED PROJECT COST		$87,605
DISMANTLEMENT EXPENSE		
TRANSFER EQUIPMENT		
GROSS AMOUNT FOR APPROVAL		$87,605
LESS TRANSFER EQUIPMENT		
LESS SALVAGE OR TRADE-IN ALLOWANCE		
NET CASH REQUIRED (GOF-3027)		$87,605

RETIREMENT DATA

	AMOUNT
COST	
DISMANTLEMENT	
LESS SALVAGE	
TOTAL - CHARGE RESERVE	

ECONOMICS as called for in General Procedure Memo #3 Attachment C. (Attach calculations)

ECONOMICS PERIOD 1985-90	6 YEAR AVG
NET SALES	1,857
NAT (PROFIT/SAVINGS)	389
TOTAL INVESTMENT	297
% ROI (ON TOTAL INVEST.)	131
INTERNAL RATE OF RETURN	337%
PAYOUT OF NEW FIXED CAPITAL	.76 YR

REVISION DETAIL (GROSS AMOUNTS)

REV.#	DATE	AMOUNT	CUM. AUTHORIZATION
1			
2			
3			
4			
5			
6			
7			

DESCRIPTION AND REASONS REQUIRED

Funds of ----------$87,605 are requested to purchase and install a 10 inch Bepex Extructer to wax encapsulate heat stabilizer.

RECEIVED
JAN 07 1985
M. ODIAN

SUMMARY OF ESTIMATED COST - Details on GOF-3027

ESTIMATE NO.:

STARTING DATE: Sept. 1984

COMPLETION DATE: April, 1985

ITEM NO.	DESCRIPTION	MATERIAL	LABOR	ENGINEERING	TOTAL
	NET CASH REQUIRED	$76,088	11,017	500	87,605

ACCOUNTING TREATMENT

ITEM NO.		DEPR. RATE
1-7,9	83,245 Capitalize Equipment (class 320) 4340 Expense 57 A/C Sales Use Tax	7 1/2%

APPROVALS

NAME	DATE
PROJECT SPONSOR	
[signature]	10/23/84
[signature]	1/11/85
[signature]	1/17/85

ACCOUNTING TREATMENT / ECONOMICS APPROVED BY DIV. CONTROLLER (CHECK BOX(ES))

JAN 18 1985

5-77

CYANAMID

Request For Capital Expenditures/Retirements

REPORTING CLASSIFICATION	DATE APPROVED	JOB ORDER NO.
D-1		

DIVISION OR COMPANY: olymer Products

LOCATION: Chicago Plant

J.O. CONTROL POINT: 097

JOB TITLE: Purchase and install a 10 inch Extructer.

SUMMARY OF AMOUNTS

DESCRIPTION	LOCAL CURRENCY	U.S. DOLLARS
ESTIMATED PROJECT COST		$87,605
DISMANTLEMENT EXPENSE		
TRANSFER EQUIPMENT		
GROSS AMOUNT FOR APPROVAL		$87,605
LESS TRANSFER EQUIPMENT		
LESS SALVAGE OR TRADE-IN ALLOWANCE		
NET CASH REQUIRED (GOF-3027)		$87,605

RETIREMENT DATA

	AMOUNT
COST	
DISMANTLEMENT	
LESS SALVAGE	
TOTAL - CHARGE RESERVE	

ECONOMICS as called for in General Procedure Memo #3 Attachment C. (Attach calculations)

ECONOMICS PERIOD	
NET SALES	
NAT (PROFIT/SAVINGS)	
TOTAL INVESTMENT	
% ROI (ON TOTAL INVEST.)	
INTERNAL RATE OF RETURN	
PAYOUT OF NEW FIXED CAPITAL	

REVISION DETAIL (GROSS AMOUNTS)

REV.#	DATE	AMOUNT	CUM. AUTHORIZATION
1			
2			
3			
4			
5			
6			
7			

DESCRIPTION AND REASONS REQUIRED

Funds of ----------$87,605 are requested to purchase and install a 10 inch Bepex Extructer to wax encapsulate heat stabilizer.

SUMMARY OF ESTIMATED COST - Details on GOF-3027

ESTIMATE NO.:

STARTING DATE: Sept. 1984

COMPLETION DATE: April, 1985

ITEM NO.	DESCRIPTION	MATERIAL	LABOR	ENGINEERING	TOTAL
	See Attached				
	NET CASH REQUIRED	$76,088	11,017	500	87,605

ACCOUNTING TREATMENT

ITEM NO.		DEPR. RATE
0980	Dr $ 4,340 Operating Expense Dr $ 83,265 Equipment (320)	7-½

ACCOUNTING TREATMENT / ECONOMICS APPROVED BY DIV. CONTROLLER [CHECK BOX(ES)]

10/29/84 ☑ ☐

DATE

POST AUDIT PERIOD

POST AUDIT DUE DATE

DISTRIBUTION

APPROVALS

NAME	DATE
PROJECT SPONSOR	10/29/84
DIVISION PRESIDENT/DIRECTOR	
CORPORATE OFFICER	

NA 3006 REV. 5-77

CYWI 25-0007218

DESCRIPTION AND REASONS REQUIRED

PROPOSED WORK AND COST

Funds of ----------$87,605.00
are requested to purchase and install a 10 inch Bepex Extructer to wax encapsulate heat stabilizer.

PRESENT SITUATION

Envirostrand, recently purchased by Associate Lead, has captured 5-10% of the lead stabilizer market with their 1mm strand product.

Reports from our slaes people indicate a very strong customer interest in a stranded stabilizer which minimizes lead dust generation.

Hammond Lead reportedly has samples of their extrudate at customers plants for evaluation.

Plant trials of the rental Bepex 6" Extructer have been successful on all types of stabilizers (lead phosphite is not being considered at this time) with production rates of 150 to 400 lbs./hr.. It is estimated that the annual output of the RE-10 Bepex machine would be 3.0-5.0M lbs./yr. depending upon product mix.

We have already made a 12k pound shipment to one customer, with a 40k pound order scheduled for November 1, 1984.

Technical data support our position that the Cyastab® 1000 series stabilizers are equal to or better than our competition.

JUSTIFICATION

In order to meet customer demands and competition, we must supply lead heat stabilizers in 1mm diameter strands. The only machine that has been found that can produce the small strands, is a Bepex Extructer. If we are to meet competition and stay in business, an extructer must be purchased.

Since Cyanamid is the second entrant into the extrudate market, our ability to respond quickly and flexibly to customers' orders will be a key factor in establishing a strong number two position and in achieving our longer run objective of 2.0-2.5M PPY extrudate volume (a 20-25% share of this market segment). With the 6" machine, our capacity to make sulfo phthalate is only 24k pounds a week; we need nearly two weeks to prepare a single 40k pound truckload order. Bepex indicates that the capacity of the 10" machine is <u>at least</u> twice that of the 6" machine, reducing our response time to less

than a week -- a satisfactory interval for the vast majority of our orders.

Based on our volume projections, the 10" machine would be able to handle our requirements for the foreseeable future. We will be capacity-limited in several years with the 6" machine, necessitating purchase of a second machine at higher capital cost. Purchase of a second 6" machine at a later date is also less attractive because of the investment required to duplicate supporting machinery and equipment. The 10" machine will require only k$2-5 more in support investment than the 6" unit:

	(k$)		
	Single 6" Unit	Single 10" Unit	2 6" Units
Extructor	34	51	68
Support Equipment	34	37	68
	68	88	136

Spending the additional k$20 to install the 10" machine clearly seems worthwhile. Our marginal income (NAT basis) on a single truckload order is more than k$9. Three truckloads more than compensate for the additional investment in the 10" unit.

The addition of the Cyastab 1000 series extrudates to our product line affords an excellent opportunity to revitalize our image in the lead stabilizer market and forge ahead in market postition.

DETAILS OF PROPOSAL

A Rietz model RE-10-K5F431 Extructer will be purchased with a 20 H.P. motor, and controls. A packaging line for boxes or semi-bulk bags will be installed. The existing air pallet unloading stand, vibrator screen and take-off belt will be used.

PRODUCTION FACTORS

This proposal will not alter product quality or production.

CONTINGENT FUTURE COMMITMENTS

An additional vibrating screen at a cost of k$5-10 may be required as the extructer output increases towards the maximum.

ALTERNATIVES CONSIDERED

Purchase of a 6" extructer was reviewed and rejected as detailed above.

RISKS

No operating risks are involved.

CONCISE SUMMARY

Purchase a 10 inch Extructer to meet customer and competitive demands for a 1mm extrudate.

8027 REV. 7/62 PRINTED IN U.S.A. 7/62

TAIL SHEET

SHEET NO.	JOB ORDER NO.	DATE
		October 22, 1984

COMPANY	LOCATION
American Cyanamid	Chicago Plant

ITEM OR CODE NO.	DESCRIPTION	EQUIPMENT OR MATERIALS	LABOR	ENG. MECH. SVC.	TOTAL
1	Extructer	50,745		500	51,245
2	Packaging system	14,303			14,303
3	Electric	1,500	4,000		5,500
4	More A/P system		5,917		5,917
5	Extructer enclosure	200	600		800
6	Instrumentation	2,500			2,500
7	Shipping	500			500
8	Tax	4,340			4,340
9	Air chiller	2,000	500		2,500
		76,088	11.017	500	87,605

N14579.02

CYANAMID

To: B. Coopersmith

Date: January 16, 1985

Location: Wayne

Copy to:

From: C. G. Neumann

Location: Wayne

Extension:

Subject: BEPEX EXTRUCTER JOB ORDER -- SUPPORTING ECONOMICS

Reference:

Attached are supporting economics for the 10" Bepex extructer (k$88) to make stranded lead stabilizer at Chicago. Projected selling prices and volumes for both powdered and stranded material are the same as the ones in the 1985 Annual Business Plan and the Plastics Additives Comprehensive Plan.

Installation of the Bepex equipment is clearly attractive. Comparing the "produce stranded material" case against "business as usual" shows that the incremental cash flows from the sale of stranded material have a present value of nearly k$800 (20% discount rate).

CGN

Charles G. Neumann

CGN/mdb
9/8849j

Attachment

16-Jan
BAS1

CYANAMID LEAD STABILIZER BUSINESS
BUSINESS AS USUAL

BASE SALES	1984	1985	1986	1987	1988	1989	1990	1985-90 AVERAGE
UNIT SELLING PRICE	0.61	0.65	0.67	0.69	0.71	0.73	0.77	
SALES VOLUME	6875	6000	5500	5000	5000	5000	5000	
SALES	4194	3900	3685	3450	3550	3650	3833	3678
UNIT VARIABLE COST	0.34	0.36	0.37	0.39	0.41	0.43	0.45	
VARIABLE COST	2338	2160	2035	1950	2050	2150	2258	
MARGINAL INCOME	1856	1740	1650	1500	1500	1500	1575	1578
STRANDED SALES								
UNIT SELLING PRICE								
SALES VOLUME								
SALES								
UNIT VARIABLE COST								
VARIABLE COST								
MARGINAL INCOME								
TOTAL MARGINAL INCOME	1856	1740	1650	1500	1500	1500	1575	1578
TOTAL PERIOD COST	962	990	1080	1115	1200	1250	1378	
GROSS PROFIT	894	750	570	385	300	250	197	409
BASE COMMERCIAL EXPENSES	506	531	558	586	615	646	678	
R&D								
DIVISIONAL EXPENSES	286	300	315	331	348	365	383	
GOODWILL	-30	-30	-30	-30	-30	-30	-30	
NBT	72	-112	-333	-562	-693	-791	-894	-564
TAXES	36	-56	-167	-281	-346	-395	-447	
NAT	36	-56	-167	-281	-346	-395	-447	-282

N14579.04

BUSINESS AS USUAL CASH FLOW

	1983	1984	1985	1986	1987	1988	1989	1990	1985-90 AVERAGE
NBT		72	-112	-333	-562	-693	-791	-894	-564
+BOOK DEPRECIATION		171	183	196	210	225	240	256	
+GOODWILL		30	30	30	30	30	30	30	
-TAX DEPRECIATION		166	169	174	182	187	196	206	
NBT (Tax Basis)		107	-67	-281	-503	-625	-717	-814	
INCOME TAX		54	-34	-141	-252	-312	-359	-407	
ITC		17	18	19	20	21	22	23	
NAT (Tax Basis)		71	-16	-122	-232	-292	-337	-384	
TAX DEPRECIATION		166	169	174	182	187	196	206	
OPERATING CASH FLOW		237	153	53	-50	-105	-141	-178	-45
CAPITAL SPENDING									
MAINTENANCE CAPITAL		170	179	187	197	207	217	228	
WORKING CAPITAL									
Receivables	412	466	433	409	383	394	406	426	
Inventories	342	435	402	379	363	382	400	420	
Payables	204	260	240	226	217	228	239	251	
Total	550	641	595	562	530	548	567	595	566
CHANGE IN WORKING CAPITAL	550	91	-46	-33	-32	19	19	28	
REVALUATION		17	22	20	19	18	19	20	
NET CASH FLOW, BUSINESS AS USUAL		-8	43	-81	-196	-312	-357	-415	-220

PRESENT VALUE, 1985-90 CASH FLOW (12%): -777

PRESENT VALUE, 1985-90 CASH FLOW (20%): -567

16-Jan
BAS2

CYANAMID LEAD STABILIZER BUSINESS
PRODUCE STRANDED MATERIAL

BASE SALES	1984	1985	1986	1987	1988	1989	1990	1985-90 AVERAGE
UNIT SELLING PRICE	0.61	0.65	0.67	0.69	0.71	0.73	0.77	
SALES VOLUME	6875	6000	5500	5000	5000	5000	5000	
SALES	4194	3900	3685	3450	3550	3650	3833	3678
UNIT VARIABLE COST	0.34	0.36	0.37	0.39	0.41	0.43	0.45	
VARIABLE COST	2338	2160	2035	1950	2050	2150	2258	
MARGINAL INCOME	1856	1740	1650	1500	1500	1500	1575	1578
STRANDED SALES								
UNIT SELLING PRICE		0.94	0.97	1.01	1.07	1.12	1.18	
SALES VOLUME		500	1000	1500	2000	2500	2750	
SALES		470	970	1515	2140	2800	3245	1857
UNIT VARIABLE COST		0.51	0.54	0.57	0.60	0.63	0.66	
VARIABLE COST		255	540	855	1200	1575	1815	
MARGINAL INCOME		215	430	660	940	1225	1430	
TOTAL MARGINAL INCOME	1856	1955	2080	2160	2440	2725	3005	2394
TOTAL PERIOD COST	962	990	1080	1115	1200	1250	1378	
START-UP EXPENSE		12						
GROSS PROFIT	894	953	1000	1045	1240	1475	1627	1223
BASE COMMERCIAL EXPENSES	506	531	558	586	615	646	678	
INCREMENTAL DISTRIBUTION COSTS		10	20	30	40	50	55	
INCREMENTAL ADVERTISING COSTS		25	25	25				
R&D	50							
DIVISIONAL EXPENSES	286	300	315	331	348	365	383	
GOODWILL	-30	-30	-30	-30	-30	-30	-30	
NBT	22	56	52	43	207	384	536	213
TAXES	11	28	26	22	104	192	268	
NAT	11	28	26	22	104	192	268	107

PRODUCE STRANDED MATERIAL CASH FLOW

	1983	1984	1985	1986	1987	1988	1989	1990	1985-90 AVERAGE
NBT		22	56	52	43	207	384	536	213
+BOOK DEPRECIATION		171	189	202	216	230	245	261	
+GOODWILL		30	30	30	30	30	30	30	
-TAX DEPRECIATION		166	181	191	198	203	212	206	
NBT (Tax Basis)		57	95	92	91	265	447	621	
INCOME TAX		29	47	46	46	132	224	310	
ITC		17	25	19	20	21	22	23	
NAT (Tax Basis)		46	73	65	65	153	245	333	
TAX DEPRECIATION		166	181	191	198	203	212	206	
OPERATING CASH FLOW		212	253	256	263	356	457	539	354
CAPITAL SPENDING			76						
MAINTENANCE CAPITAL		170	179	187	197	207	217	228	
WORKING CAPITAL									
Receivables	412	466	486	517	552	632	717	786	
Inventories	342	435	449	479	522	605	693	758	
Payables	204	260	268	286	312	361	414	453	
Total	550	641	667	710	762	876	996	1092	850
CHANGE IN WORKING CAPITAL	550	91	25	44	52	114	120	96	
REVALUATION		17	22	22	24	26	30	35	
NET CASH FLOW WITH STRANDED MATERIAL		-33	-5	48	38	61	151	250	91

PRESENT VALUE, 1985-90 CASH FLOW (12%): 312

PRESENT VALUE, 1985-90 CASH FLOW (20%): 225

	1984	1985	1986	1987	1988	1989	1990
NET CASH FLOW WITH STRANDED MATERIAL	-33	-5	48	38	61	151	250
NET CASH FLOW, BUSINESS AS USUAL	-8	43	-81	-196	-312	-357	-415
INCREMENTAL CASH FLOW	-25	-48	129	234	373	508	665

PRESENT VALUE, 1985-90 INCR. CASH FLOW (12%): 1089

PRESENT VALUE, 1985-90 INCR. CASH FLOW (20%): 792

GOF-3027 REV. 7/62 PRINTED IN U.S.A. 7/62

DETAIL SHEET

SHEET NO.	JOB ORDER NO.	DATE
		October 22, 1984

COMPANY	LOCATION
American Cyanamid	Chicago Plant

ITEM OR CODE NO.	DESCRIPTION	EQUIPMENT OR MATERIALS	LABOR	ENG. MECH. SVC.	TOTAL
0201	Extructer	50,745		500	51,245
0202	Packaging system	14,303			14,303
5321	Electric	1,500	4,000		5,500
0203	More A/P system		5,917		5,917
0204	Extructer enclosure	200	600		800
5901	Instrumentation	2,500			2,500
0205	Shipping	500			500
0980	Tax - Expense	4,340			4,340
0301	Air chiller	2,000	500		2,500
		76,088	11,017	500	87,605

N14579.05