ESTIMATE PURPOSE: APPROPRIATION

Monsanto COMPANY

CENTRAL ENGINEERING DEPARTMENT
COST ENGINEERIND SECTION

CEA NO. 1668
SCOPE APPROVAL DATE
CE ESTIMATE NO. 00-155
DATE JUNE 7, 1967
ESTIMATOR B. Kennedy
PRODUCT MANAGER R. P. STEVENS
PROJECT MANAGER R. S. YATES
ESTIMATE TYPE CLASS II
CONFIDENCE RANGE ± 10-15%

PROJECT ESTIMATE SUMMARY

EST. FOR CED REVIEW
NOT FOR TRANSMITTAL
TO DIVISION

"THIS ESTIMATE BASED ON W.G. KRUMMRICH PLANT LOCATION. TO BE CONVERTED TO ESTIMATED COST AT YOKKAICHI, JAPAN BY OTHERS."

PROJECT TITLE BIPHENYL-AROCLOR
PLANT YOKKAICHI, JAPAN DIVISION ORGANIC

DESCRIPTION	EQUIPMENT	LABOR	MATERIAL	INSTALLED	TOTAL COST
CAPITAL					
INSTALLED MACHINERY & EQUIPMENT	385,000	231,460	215,950	103,010	935,420
UNINSTALLED MACHINERY & EQUIPMENT				—	—
LAND				—	—
BUILDINGS		13,130	12,160	16,600	41,890
CONSTRUCTION INDIRECTS				173,300	173,300
ENGINEERING 16 % TOTAL CAPITAL				256,000	256,000
DISTRIBUTIVES TRANSFER TO EXPENSE				(—)	(—)
CONTINGENCY 12 % TOTAL CAPITAL				193,390	193,390
TOTAL CAPITAL	385,000	244,590	228,110	742,300	1,600,000
EXPENSE				—	—
DISMANTLING				—	—
SELF INSURED LOSSES				—	—
REPAIRS				—	—
RELOCATIONS				—	—
MODIFICATIONS & ALTERATIONS				—	—
DISTRIBUTIVES				—	—
ABANDONED DESIGN				—	—
CONTINGENCY				—	—
TOTAL EXPENSE				—	—
TOTAL PROJECT COST	385,000	244,590	228,110	742,300	1,600,000

DSW 200726

APPROVAL _____ EST. ENG. SUPERVISOR _____ DATE

STLCOPCB4058790

MONSANTO COMPANY
CENTRAL ENGINEERING DEPARTMENT
COST ENGINEERING SECTION

CEA NO. 1668
CE ESTIMATE NO. 00-155
DATE JUNE 5, 1967
ESTIMATOR B. Kennedy

CATEGORY SUMMARY SHEET A
M & E

PROJECT TITLE BIPHENYL - AROCLOR, JAPAN
PLANT YOKKAICHI DIVISION ORGANIC
AREA / TITLE 100 - BIPHENYL

CAT	DESCRIPTION	EQUIPMENT	LABOR	MATERIAL	INSTALLED	TOTAL COST
01	EQUIPMENT	200000				200000
02	INSTRUMENTS	40000				40000
03	SET & TEST EQUIPMENT		15100	2430	10500	28030
04	SET & TEST INSTRUMENTS		7,000	3,000	1000	11000
05	PILING				6000	6000
06	EXCAVATION		2750	—	—	2750
07	FOUNDATIONS		19.800	8200	—	28000
08	SUPPORTS, PLATFORMS		5510	15330	—	20840
09	BLDG. ITEMS				16800	16800
10	SPRINKLERS & FIRE PROTECT: NON BLDG				3300	3300
11	PIPING - PROCESS & SERVICE		70000	75000	—	145000
12	DUCTWORK - PROCESS				—	—
13	ELECTRICAL - PROCESS		25000	20000	—	45000
14	SITE PREPARATION				—	—
15	SEWERS & DRAINS		1000	400	—	1400
16	UNDERGROUND MAINS		1400	800	—	2200
17	YARDS, ROADS & FENCING				—	—
18	RAILROADS				—	—
19	INSULATION: NON-BLDG.				30000	30000
20	PAINTING: NON-BLDG				5000	5000
23	LUMP SUM CONTRACTS				—	—
24	CANCELLATION CHARGES				—	—
	INSTALLED MACHINERY & EQUIPMENT	240000	147560	125160	72600	585320
21	SPARE EQUIPMENT - UNINSTALLED					
22	SPARE INSTRUMENTS - UNINSTALLED					
	UNINSTALLED SPARE EQUIP. & INSTR.					

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MONSANTO COMPANY
CENTRAL ENGINEERING DEPARTMENT
COST ENGINEERING SECTION

CEA NO. 1668
CE ESTIMATE NO. 00-1.55
DATE JUNE 6, 1967
ESTIMATOR B. Kennedy

CATEGORY SUMMARY SHEET A
M & E

PROJECT TITLE BIPHENYL - AROCLOR, JAPAN
PLANT YOKKAICHI DIVISION ORGANIC
AREA / TITLE 200 - AROCLOR

CAT	DESCRIPTION	EQUIPMENT	LABOR	MATERIAL	INSTALLED	TOTAL COST
01	EQUIPMENT	120000				120000
02	INSTRUMENTS	25000				25000
03	SET & TEST EQUIPMENT		11050	1340	3610	16000
04	SET & TEST INSTRUMENTS		4500	1750	750	7000
05	PILING				—	—
06	EXCAVATION		1000	—	—	1000
07	FOUNDATIONS		7000	3000	—	10000
08	SUPPORTS, PLATFORMS		14350	33500	—	47850
09					—	—
10	SPRINKLERS & FIRE PROTECT: NON BLDG				—	—
11	PIPING - PROCESS & SERVICE		35000	40000	—	75000
12	DUCTWORK - PROCESS		200	800	—	1000
13	ELECTRICAL - PROCESS		10000	10000	—	20000
14	SITE PREPARATION				—	—
15	SEWERS & DRAINS		700	300	—	1000
16	UNDERGROUND MAINS				—	—
17	YARDS, ROADS & FENCING		100	100	—	200
18	RAILROADS				—	—
19	INSULATION: NON-BLDG.				26050	26050
20	PAINTING: NON-BLDG					
23	LUMP SUM CONTRACTS				—	—
24	CANCELLATION CHARGES				—	—
	INSTALLED MACHINERY & EQUIPMENT	145000	83900	90790	30410	350100
21	SPARE EQUIPMENT - UNINSTALLED					
22	SPARE INSTRUMENTS - UNINSTALLED					
	UNINSTALLED SPARE EQUIP. & INSTR.					
	NOTE: AROCLOR BLENDING =	19%	OF TOTAL	COST		
	AROCLOR OTHER =	81%	"	"		

TOTAL = 100 %

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MONSANTO COMPANY
CENTRAL ENGINEERING DEPARTMENT
COST ENGINEERING SECTION

CEA NO. 1668
CE ESTIMATE NO. 00-155
DATE JUNE 7, 1967
ESTIMATOR B. Kennedy

CATEGORY SUMMARY SHEET A
M & E

PROJECT TITLE BIPHENYL - AROCLOR, JAPAN
PLANT YOKKAICHI DIVISION ORGANIC
AREA / TITLE 300 - BUILDING ITEMS

CAT	DESCRIPTION	EQUIPMENT	LABOR	MATERIAL	INSTALLED	TOTAL COST
01	EQUIPMENT					—
02	INSTRUMENTS					—
03	SET & TEST EQUIPMENT					—
04	SET & TEST INSTRUMENTS					—
05	PILING					—
06	EXCAVATION		400	—	—	400
07	FOUNDATIONS		3000	1500	—	4500
08	SUPPORTS, PLATFORMS				—	—
09	BLDG. ITEMS N.O.C.		6580	8010	8000	22590
10	SPRINKLERS & FIRE PROTECT: ~~NON BLDG~~				7500	7500
11	PIPING - ~~PROCESS & SERVICE~~		750	750	—	1500
12	DUCTWORK - ~~PROCESS~~					
13	ELECTRICAL - ~~PROCESS~~ BLDG		1500	1500	—	3000
14	SITE PREPARATION					
15	SEWERS & DRAINS		900	400	—	1300
16	UNDERGROUND MAINS				—	—
17	YARDS, ROADS & FENCING				—	—
18	RAILROADS				—	—
19	INSULATION: ~~NON-BLDG.~~				600	600
20	PAINTING: ~~NON-BLDG~~				500	500
23	LUMP SUM CONTRACTS				—	—
24	CANCELLATION CHARGES				—	—
	INSTALLED MACHINERY & EQUIPMENT		13130	12160	16600	41890
21	SPARE EQUIPMENT - UNINSTALLED					
22	SPARE INSTRUMENTS - UNINSTALLED					
	UNINSTALLED SPARE EQUIP. & INSTR.					

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PROCEDURE 120
EXHIBIT M

MONSANTO COMPANY
CENTRAL ENGINEERING DEPARTMENT
COST ENGINEERING SECTION

CEA NO. 1668
CE ESTIMATE NO 00-155
DATE JUNE 7, 1967
ESTIMATOR B Kennedy

CATEGORY SUMMARY SHEET C
DISTRIBUTIVES

PROJECT TITLE BIPHENYL - AROCLOR
PLANT YOKKAICHI, JAPAN DIVISION ORGANIC
AREA/TITLE 900 - DISTRIBUTIVES

	D.L. = 244,590					TOTAL COST
50	~~SALARIES & WAGES - CONTR.~~ 5%				12 200	12 200
51	~~TAXES, INSURANCE & FUNDS - CONTR.~~	30% D.L. + 10% CONST. MAT. (10,000)			83 400	83 400
~~52~~	~~WAREHOUSE COST CONTR.~~					
53	~~CONST. TOOLS & SUPPLIES - NONEXPENDABLE~~	3%			7 300	7 300
~~54~~	~~CONST. TOOLS & SUPPLIES - EXPENDABLE~~					
55	CONST. EQUIPMENT RENTAL	15%			36 700	36 700
~~56~~	~~REPAIRS & SERVICES - AUTO & CONST. EQUIP.~~					
~~57~~						
58	PREMIUM WAGES & OVERTIME - CONTR.	X%			16 700	16 700
~~59~~	~~CONTRACTORS FEE~~					
60						
61						
62						
63						
64						
~~65~~	~~WAREHOUSE COSTS - MONSANTO~~					
66						
67	TEMPORARY FACILITIES	7%			17 000	17 000
~~68~~	~~DEPRECIATION~~					
	CONSTRUCTION INDIRECTS				173 300	173 300
80	CED ENGINEERING - CAPITAL				256 000	256 000
81	OUTSIDE ENGINEERING - CAPITAL				—	—
82	ENG. FROM DIVISIONS - CAPITAL				—	—
	ENGINEERING				256 000	256 000
88	DISTRIBUTIVES TRANSFER TO EXPENSE				—	(—)
89	CONTINGENCY - CAPITAL				193 390	193 390

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