



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

WILMINGTON, DELAWARE 19898

ENGINEERING DEPARTMENT
LOUVIERS BUILDING

December 5, 1983

O. L. BRANNEN - C&P - BRANDYWINE
J. M. BURKHART - C&P - BRANDYWINE
H. B. CLARK - C&P - BRANDYWINE
E. C. NELSON - C&P - BRANDYWINE
P. M. NORLING - C&P - BRANDYWINE
C. C. QUARLES - C&P - BRANDYWINE
V. R. SCHMALBACH - C&P - BRANDYWINE
H. J. STRANSKY - C&P - BRANDYWINE
D. I. GARNETT - C&P - EXPERIMENTAL STATION
F. KNOWLES/R. E. BOCKRATH - C&P - EXPERIMENTAL STATION
P. L. MEREDITH - C&P - EDGE MOOR
F. A. VOGELSBERG - C&P - EDGE MOOR
S. C. DOBERSTEIN/G. J. O'BRIEN - C&P - JACKSON LAB
N. E. KRAUSS/C. J. SLENTZ - C&P - JACKSON LAB
G. E. LYNSKEY - C&P - JACKSON LAB
P. A. WRE~~XXXXXXXXXX~~ - C&P - JACKSON LAB
R. FREAS - C&P - MEMPHIS
C. A. BAXTER - RDO - UP
N. P. BRECHTEL - DESIGN
L. T. FINNICUM - DESIGN
J. P. MURPHY - DESIGN
S. M. PEPPER - BM&I
W. W. CHEATHAM - CONSTR
J. D. ANDERSON - ESD

INTERDEPARTMENTAL SEMINAR

Attached are the speakers' notes and information from the
October 26, 1983 Seminar.

DESIGN DIVISION
Chemicals & Pigments Section

T. L. Goode

T. L. Goode
Project Manager

TLG:lrg
Atchs

N 31728

INTERDEPARTMENTAL SEMINAR

DU PONT COUNTRY CLUB - GOVERNOR'S ROOM

Wednesday, October 26, 1983, 8:00 am to 3:00 pm

INDEX OF NOTES

- A. Introduction - C. C. Quarles
- B. Project Front-End Loading - L. T. Finnicum
- C. R&D Perspective of 1984 Capital Budget - H. B. Clark
- D. Project Activity in RDOs - C. A. Baxter
- E. Project Critique - C. C. Quarles
- F. Quality Control Performance and Vendor Relations -
H. J. Stransky.
- G. Panel - J. P. Murphy, J. P. McFadden, R. H. Dunlap

N 31728.01

DUP050146484

A

WELCOME
TO
THIRD ANNUAL SEMINAR
OF
ENGINEERING DEPARTMENT
DESIGN DIVISION
AND
CHEMICALS AND PIGMENTS DEPARTMENT
DEPARTMENTAL ENGINEER'S OFFICE

CCQUARLES/CAR
10/26/83

N 31728.02

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DESIGN/DEO SEMINARS

1981

PURPOSE AND BACKGROUND FOR SEMINAR

JOINT MISSION, FUNCTIONS, EXPECTATIONS

CONSTRUCTION FORECAST PREPARATIONS AND VGA'S FOR FORECASTS

COMMUNICATIONS, CONTACTS, RELATIONS

SMALL PROJECTS

GROUP DISCUSSIONS

- PROJECTS
- STATUS REPORTS, CHANGE ORDERS, REASON FOR PANIC SITUATION

1982

PROJECT OBJECTIVES LETTERS

ACCURACY OF ESTIMATES

COST OF CONTRACT ENGINEERING

ENGINEERING WORK REQUESTS

CCQUARLES/CAR
10/26/83

PRELIMINARY OUTLINE FOR INTERDEPARTMENTAL SEMINAR
KICKOFF TALK - J. T. WARD

Purpose and Background for Seminar

Background

Charter of Engineering Department/Design Division

Size of Effort

Opportunities for Improvement

- Flexibility - Varying Work Loads
- Cost - Comparisons
- Response - Backlog/Front End Loading
- Quality - QA Programs
- Accountability - Overruns

Difficulties and Uncertainties

- Forecasting (Maintaining Forecast)
- Efficiency - False Starts, Prolonged Schedules
- Expectations/Resources - Qualifications for Judgement
- Firmness of Data and Decisions - Recycle
- Relationships - Customer/Vendor

Purpose

Understanding of Mutual Objectives

Setting of Goals for Improvement

"IN

SEARCH

OF

EXCELLENCE"

CCQUARLES/CAR
10/26/83

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OUR VALUE

- BOTH DEO AND ENGINEERING DEPARTMENT EXIST BECAUSE OF PERCEIVED VALUE - BECAUSE OUR CUSTOMERS BELIEVE WE HAVE A HIGHER VALUE IN USE THAN THE OTHER ALTERNATIVES AVAILABLE.
- THAT PERCEPTION IS NOT UNIFORM FOR EITHER DEO OR ENGINEERING.
- WE BOTH HAVE A CONTINUING CHALLENGE TO INCREASE OUR ACTUAL VALUE AND, THEREBY, OUR PERCEIVED VALUE.

C. C. QUARLES/JCC
3/13/81

PERCEIVED VALUE

QUALITY

SPEED

RESPONSIVENESS

TECHNOLOGY SECURITY

EXPERTISE

C. C. QUARLES/JCC
3/13/81

DUP050146490

EIGHT ATTRIBUTES

OF

EXCELLENT, INNOVATIVE COMPANIES

- A BIAS FOR ACTION
- CLOSE TO THE CUSTOMER
- AUTONOMY AND ENTREPRENEURSHIP
- PRODUCTIVITY THROUGH PEOPLE
- HANDS-ON VALUE DRIVEN
- STICK TO THE KNITTING
- SIMPLE FORM, LEAN STAFF
- SIMULTANEOUS LOOSE-TIGHT PROPERTIES

CCQUARLES/CAR
10/26/83

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"IF YOU DON'T SHOOT FOR ONE HUNDRED PERCENT,
YOU ARE TOLERATING MISTAKES. YOU'LL GET
WHAT YOU ASKED FOR."

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10/26/83

DUP050146492

REPORT CARD

DESIGN/DEO/R&D

CCQUARLES/CAR
10/26/83

DUP050146493

AREAS NEEDING IMPROVEMENT

SAFETY

RELIABILITY OR OPERATING UTILITY

MAINTENANCE COSTS

FREEDOM OF START-UP PROBLEMS

QUALITY ASSURANCE

FINANCIAL MANAGEMENT AND RESPONSIBILITY

DESIGN COSTS

PROJECT SCHEDULES

RESPONSIVENESS AND FOLLOW-THROUGH

RELIABILITY OF ESTIMATES

C. QUARLES/JCC
13/81

DUP050146494

PRODUCTION DIVISION
LONG RANGE OBJECTIVES

- SAFETY - NO INJURIES
- COMPETITIVE COSTS
- SUPERIOR QUALITY AND RELIABILITY
- CAPACITY TO MEET ALL MARKETING OBJECTIVES
- MINIMUM CAPITAL COMMITMENT
- MOTIVATE PEOPLE TO CONTRIBUTE THEIR BEST

4/20/83

SOME AREAS

DE

CONTINUING AND INCREASING EMPHASIS

SAFETY

PROJECT OBJECTIVES

QUALITY ASSURANCE - VENDOR PERFORMANCE

AUTHORIZATION TIMING

EXPENDITURES VERSUS FORECAST

EQUIPMENT STANDARDIZATION

LIFETIME VERSUS FIRST COST

JUST IN TIME - ON-TIME DELIVERY

CCQUARLES/CAR
10/26/83

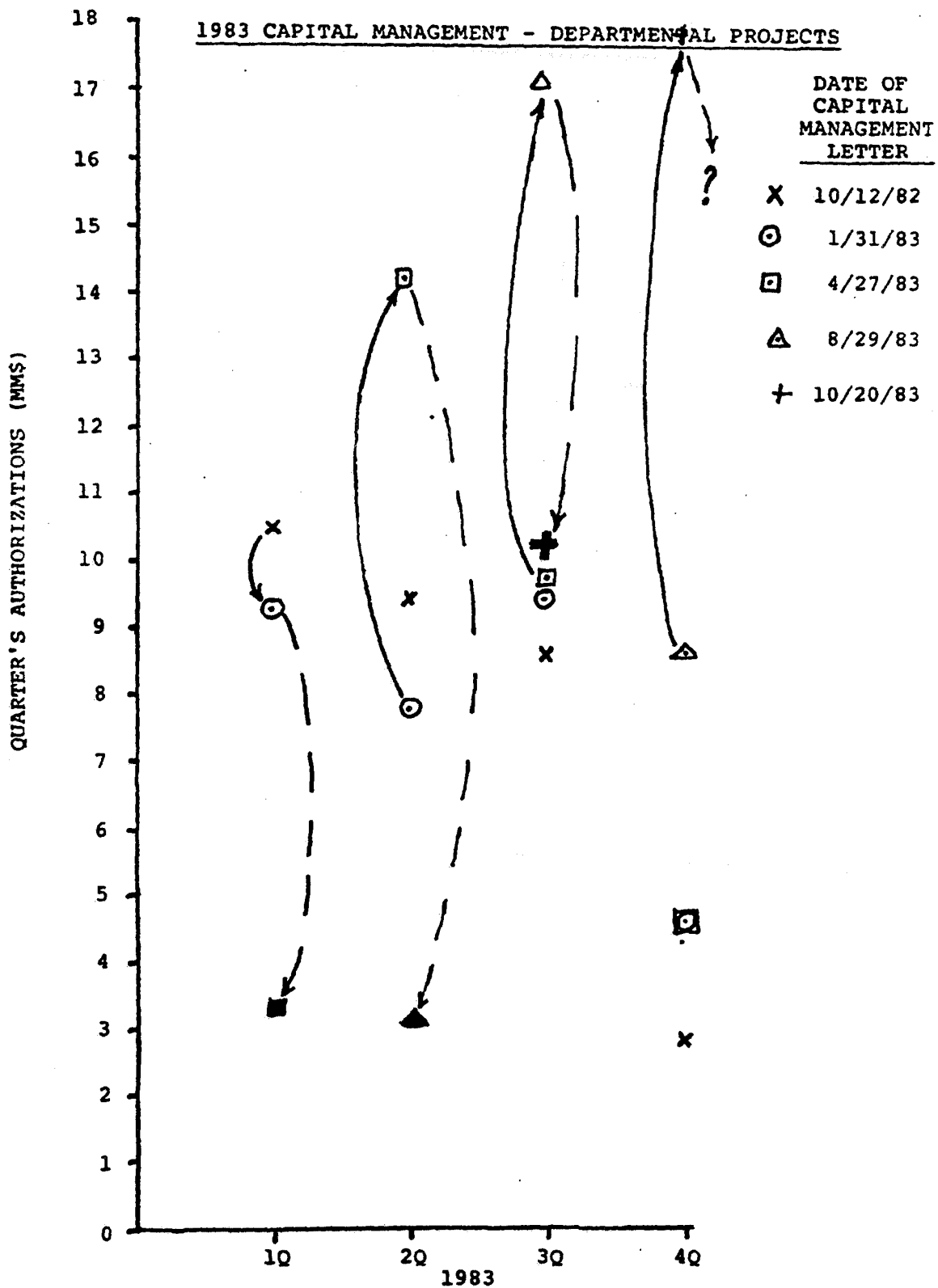
DUP050146496

"WE HAD PLANNING SYSTEMS OF EVERY SORT FROM
LONG-TERM STRATEGIC SYSTEMS TO SHORT-TERM
ONES. BUT WE COULDN'T PREDICT WHAT WE WERE
GOING TO SELL NEXT MONTH."*

*CHARLES AMES OF RELIANCE ELECTRIC

CCQUARLES/CAR
10/26/83

DUP050146497



ENGINEERING DEPARTMENT CHARGES TO COST

NINE MONTHS 1983

(Costs in M\$)

	<u>ACTUAL</u>			<u>FORECAST</u>
	<u>1981</u>	<u>1982</u>	<u>1983 YTD</u> <u>ANNUALIZED</u>	<u>1983</u> <u>12 MONTHS</u>
PRODUCTION		12,131	9,445	8,598
R&D		4,972	4,935	6,237
MARKETING		281	512	458
ALL OTHER	<u> </u>	<u>467</u>	<u>411</u>	<u>342</u>
TOTAL	16,848	17,851	15,303	15,635

	<u>1981</u>	<u>1982</u>	<u>1983 YTD</u> <u>ANNUALIZED</u>
DESIGN			
EWR	5,327	6,426	4,149
P&E	2,454	2,201	2,557
ESD STUDIES	5,774	5,886	5,871
ESD FIELD ENGINEERS	2,526	2,449	2,014
ERDD	504	570	265
BM&I AND CON- STRUCTION	<u>263</u>	<u>319</u>	<u>447</u>
	16,848	17,851	15,303

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10/26/83

WE'VE COME A LONG WAY

TOGETHER!

CCQUARLES/CAR
10/26/83

DUP050146500

SLIDE 1

(B)

FRONT END LOADING

SLIDE 2

ENGINEERING HAS
CAPABILITY
RESPONSIBILITY

TO BE INVOLVED IN ESTABLISHING PROJECT TECHNOLOGY

SLIDE 3

TECHNOLOGY

MUST BE SOUND

MUST BE COMPETATIVE

SLIDE 4

TIMING

MUST BE EARLY TO AVOID MISSED OPPORTUNITIES

L.T.FINNICUM

10/26/83

N 31728.03

DUP050146501

SLIDE 5

KEY CONCEPTS:

TECHNOLOGY

EARLY

SLIDE 6

FRONT END LOADING IS:

THE APPLICATION OF ENGINEERING AND INDUSTRIAL
DEPARTMENT RESOURCES DURING A PROJECT'S STUDY
AND P&E STAGES TO ASSURE THAT THE BASES FOR A
PROPOSED FACILITY ARE TECHNICALLY SOUND, COST
COMPETITIVE AND THAT THEY MEET PROJECT OBJECTIVES --
BEFORE DETAILED DESIGN WORK BEGINS.

SLIDE 7

ASK QUESTIONS IN THE AREAS OF:

BUSINESS

TECHNOLOGY

ALTERNATIVES

ECONOMICS

DESIGN

SLIDE 8

BENEFITS:

SOUND TECHNICAL BASIS

SLIDE 9 - 12

BENEFITS:

SOUND TECHNICAL BASIS
OPTIMIZATION
SATISFY BUSINESS NEEDS
INCLUDE "STATE OF THE ART"

PRODUCT RESULTS:

LESS CHANGE
LESS REWORK
LOWER TOTAL PROJECT COST

SLIDE 13

RESOURCES:

DESIGN
CONSTRUCTION
BM&I
ESD
ER&DD
OUTSIDE

SLIDE 14

FACTORS TO DECIDE WHEN TO APPLY FRONT END LOADING:

BUSINESS OBJECTIVES
PROBABILITY OF AUTHORIZATION
DEGREE OF INNOVATION

SLIDE 15

GOAL OF FRONT END LOADING:

TO ESTABLISH A SOUND TECHNICAL BASIS FOR A
PROJECT BY EARLY PARTICIPATION OF THE
ENGINEERING DEPARTMENT WITH THE INDUSTRIAL
DEPARTMENT.

C

CHEMICALS & PIGMENTS DEPARTMENT

INCREASING ENGINEERING DEPARTMENT INVOLVEMENT
IN PROJECTS

H. B. CLARK

10/26/83

N 31728.04

DUP050146505

R&D COMMITMENT:

"INCREASE ENGINEERING DEPT. PROJECT RESPONSIBILITY"

EXPERIENCE TO DATE

- o PROVEN PROJECT MANAGEMENT CAPABILITY
- o FLEXIBLE TO HANDLE SWINGS IN WORKLOAD/PRIORITIES
- o DESIGN COST EFFECTIVE
 - DIRECT ACCESS TO "EXPERTS"
 - BROAD EXPERIENCE DEALING WITH MANY PLANTS
 - NOT DISTRACTED BY PLANT SUPPORT ACTIVITIES
- o THOROUGH SAFETY ANALYSIS
- o HIGH QUALITY DESIGN (CAD)
- o TECHNOLOGY SECURE (PIP)

CHEMICALS & PIGMENTS DEPARTMENT
CAPITAL BUDGET
(ALL UNITS MMS EXCEPT AS NOTED)

<u>TOTAL C&P⁽¹⁾</u>				
<u>PROJECT LEVEL</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
10	31.0	10.0 ⁽²⁾	115.0 ⁽²⁾	-
5-10	5.6	-	4.2 ⁽³⁾	5.4 ⁽³⁾
2-5	11.5	14.8	8.7	16.3
100MS-2	34.1	45.5	46.9	52.4
100MS	<u>31.6</u>	<u>37.5</u>	<u>40.9</u>	<u>46.2</u>
TOTAL	112.8	107.8	215.7	120.3

<u>ENGINEERING DEPT. RESPONSIBILITY</u>				
<u>PROJECT LEVEL</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
10	31.0	10.0	115.0	-
5-10	5.6	-	-	-
2-5	11.5	11.6	3.0	9.0
100MS-2	8.2	26.0	31.0	39.6
100MS	<u> </u>	<u>4.0</u>	<u>4.8</u>	<u>6.0</u>
TOTAL	56.3	51.6	153.8	54.6
ENGG. % OF TOTAL	50	48	71	45
ENGG % OF 2MMS	12	36	41	46

NOTES: (1) EXCLUDES NON-CONSOLIDATED SUBSIDIARIES AND CANADA.

(2) NIAGARA CHLOR-ALKALI PLANT - \$100MM

(3) NEW JOHNSONVILLE DEEP WELL

ENGINEERING DEPT. PROJECT HANDLING

PLANT CONCERNS

ENGINEERING DEPT. - INFLATES ESTIMATES

- EXPENSIVE
- UNRESPONSIVE
- TAKES LONGER

PLANTS WILL BE LESS COST-EFFECTIVE WITH REDUCED PROJECT LOAD

PLANT PROJECT ENGINEERS DEMOTIVATED BY REDUCED PROJECT CHALLENGES

RESOLVING PLANT CONCERNS
REQUIRES
GOOD COMMUNICATIONS

- o INADEQUATE SCOPES/COMMUNICATIONS ARE CHIEF CAUSE
OF HIGH ESTIMATES
- o ESTABLISH FUNCTIONAL ORGANIZATIONS TO IMPROVE
COMMUNICATIONS
 - PROJECT COORDINATORS IN R&D
 - LIAISON ENGINEER ON SITE WHERE PROJECT
ACTIVITY HIGH
- o EFFECTIVE COMMUNICATIONS
 - IMPROVE RESPONSE
 - REDUCE IN-PROCESS TIME FOR PROJECTS
 - CONTAIN/CONTROL COSTS
- o KEEP SITE-LOGICAL PROJECTS AT PLANT AS BASE LOAD
AND "MOTIVATOR"

CONCLUSION

- o USING ENGINEERING DEPT. FOR PROJECT MANAGEMENT
IS GOOD BUSINESS

- o EFFECTIVELY USING ENGG. DEPT. REQUIRES:
 - GOOD COMMUNICATIONS
 - FUNCTIONAL ORGANIZATIONS
 - ESTABLISHED PROCEDURES
 - COMMITMENT TO DEADLINES & BUDGETS
 - EXPERIENCE

1984 CIP CAPITAL FORECAST, M\$

TOTAL FORECAST EDIT 3						ENGG. DEPT RESP.			
RDO	SITE	MCN	DEPT PROJ	EXEC PROJ	TOTAL	MCN	DEPT PROJ	EXEC PROJ	TOTAL
UP 1	MEMPHIS	3705	4505	-	8210		4505	-	
2	EAST CHICAGO	1100	775	-	1875		525	-	
3									
4	CHAMBERS WORKS	7500	18510	-	26010		9745	-	
5	REPAUNO	1300	810	-	2110		-	-	
6	GRASSELLI	1200	750	-	1950		-	-	
7									
8	NIAGARA	1900	6365	10000	18265		3850	10000	
9	CLEVELAND	600	-	-	600		-	-	
10	UNIT PLANTS	1850	2845	-	4695		700	-	
11									
12	PIGMENTS JOHNSONVILLE	2800	6880	-	9680		-	-	
13	DELISLE	3200	5670	-	8870		1900	-	
14	EDGEWOODS	1500	2560	-	4060		-	-	
15									
H 16	DEER PARK	390	*	-	390		*	-	*
17	LA PORTE	2050	2230	-	4280		1200	-	
18	BEAUMONT	1400	6145	3700	11245		2650	3700	
19									
C 20	BELLE	1230	820	3500	5550		-	3500	
21	WASH WORKS	200	-	4400	4600		-	4400	
22									
UP 23	JACKSON LAB	2000	4415	-	6415		2460	-	
24	C. RUN PET LAB	250	150	-	400		-	-	
25									
UP 26	COB. PLANTS NEWARK	1200	1055	-	2255		-	-	
27	NEWPORT	950	725	-	1675		-	-	
28									
UP 29	ANTIOCH	540	730	3200	4470		-	-	
30									
UP 31	ALL OTHERS	579	275	-	854		-	-	
	TOTAL FORECAST	37449	66215	24800	128459		27535	21600	
	TOTAL BUDGET	37500	45500	24800	107800		4000	26000	21600

4000
21600
21600

D

REGIONAL DESIGN OFFICE

UNIVERSITY PLAZA

A PROGRESS REPORT

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N 31728.05

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DESIGNATED A RDO EFFECTIVE - AUGUST 15, 1983

CHARTER - TO SERVE ALL C&P DEPARTMENT SITES EXCEPT DEER PARK, LA PORTE AND BEAUMONT, WHICH WILL CONTINUE TO BE HANDLED BY RDO-HOUSTON, AND BELLE, WHICH IS ALIGNED WITH RDO-CHARLESTON. THE RDO-UP MAY SERVE OTHER DEPARTMENTS OPERATING ON SITES WHERE C&P HAS LANDLORD RESPONSIBILITIES.

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SITE	1984 CAPITAL BUDGET 3/4Q-1983		1984 BUDGET	
	(\$/M)		(\$/M)	
	C&P TOTAL	ENGG RESP.	C&P TOTAL	ENGG RESP.
BURNSIDE	575	160	0	0
CHAMBERS WORKS*	7,895	4,200	8,470	3,915
CLEVELAND	280	0	0	0
DE LISLE	3,555	710	5,670	1,750
EAST CHICAGO	0	0	525	525
EDGE MOOR	1,501	861	2,360	0
GRASSELLI	200	200	470	150
JACKSON LAB	200	0	4,190	2,460
JAMES RIVER	0	0	1,300	1,300
JOHNSONVILLE	6,400	0	7,180	450
MEMPHIS	3,675	3,675	4,935	4,935
NEWARK	400	0	505	0
NEWPORT	220	0	505	0
NIAGARA FALLS	525	350	5,050	1,450
REPAUNO	650	200	610	300
TOLEDO	180	0	500	500
WURLAND	0	0	150	0
C&P TOTALS	26,256	10,356	42,420	17,735
CHAMBERS WORKS (PPD)	0	0	1,800	1,800
CHAMBERS WORKS (PD)	2,550	2,550	600	600
RDO-UP TOTALS	28,806	12,906	44,820	20,135

* C&P RESPONSIBILITY ONLY

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<u>SITE</u>	1984 MCN <u>BUDGET</u> (\$/M)	ENGG <u>RESP.</u> (\$/M)
BURNSIDE	300	0
CHAMBERS WORKS	7,500	1,000
CLEVELAND	600	0
DE Lisle	3,200	1,000
EAST CHICAGO	1,100	200
EDGE MOOR	1,500	100
GRASSELLI	1,200	200
JACKSON LAB	2,000	0
JAMES RIVER	250	0
JOHNSONVILLE	2,800	0
MEMPHIS	3,500	800
NEWARK	1,200	0
NEWPORT	850	0
NIAGARA FALLS	1,900	200
REPAUNO	1,300	0
TOLEDO	70	0
WURLAND	50	0
C&P TOTALS	<u>29,320</u>	<u>3,500</u>

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CHALLENGES

- o INCREASE THE RDO STAFF TO HANDLE THE 1984 C&P CAPITAL BUDGET
- o RETAIN RESPONSIVENESS TO C&P NEEDS
- o BECOME THE DESIGN GROUP OF CHOICE

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FORCE FORECAST

<u>DU PONT</u>	<u>11/1/83</u>	<u>1/1/84</u>	<u>6/1/84</u>	<u>12/1/84</u>
ENGINEERS	13	14	14	14
DESIGNERS	3	4	4	4
DU PONT SUB-TOTAL	<u>16</u>	<u>18</u>	<u>18</u>	<u>18</u>
<u>ALLSTATES</u>				
ENGINEERS	6	14	20	24
DESIGNERS	20	26	37	40
ALLSTATES SUB-TOTAL	<u>26</u>	<u>40</u>	<u>57</u>	<u>64</u>
OFFICE TOTAL	42	58	75	82

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WORK LOAD

PROJECT
AUTHORIZATIONS
\$M

1980	5,000M
1981	4,800M
1982	7,700M
1983	2,230M (THRU 8/31)

THE C&P CAPITAL MANAGEMENT REPORT FOR 2Q83 INCLUDED
PROJECTS TOTALING \$4,400M WITH RDO-UP RESPONSIBILITY.

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REGIONAL DESIGN OFFICE
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FORCE FORECAST IS BASED ON:

o \$30,000M CAPITAL BUDGET

o FAIRLY EVEN DISTRIBUTION OF AUTHORIZATIONS

IF THE TOTAL AMOUNT OF WORK INCREASES OR SLIPS TO PEAK, WE MAY BE
UNABLE TO STAFF PROPERLY OR BE AS RESPONSIVE AS YOU DESIRE.

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(E)

PROJECT CRITIQUES

PREPARED BY C&P

PROJECT 3654 - DEER PARK	- SYNTHESIS GAS FACILITY
PROJECT 3653 - DEER PARK	- METHANOL PLANT NO. 3
PROJECT 2663 - DE LISLE	- 150,000 TONS/YEAR TITANIUM DIOXIDE FACILITY
PROJECT 8412 - DEER PARK	- METHANOL TERMINAL
PROJECT 2586 - CHAMBERS WORKS	- EXPANDED FACILITIES FOR PHTHALOYL CHLORIDE
PROJECT 9083 - MEMPHIS	- MEMPHIS HYDROGEN PLANT
PROJECT 8401 - DORDRECHT	- MANUFACTURING FACILITIES FOR "TERACOL" POLYETHER GLYCOL (50%)
PROJECT 7465 - BEAUMONT	- METHANOL MODERNIZATION (99%)

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PROJECT CRITIQUES

DEL-14

OBJECTIVE

TO ASSIST OTHERS WHO HAVE SUBSEQUENT PROJECTS

WHEN REQUIRED

MOST PROJECTS OVER \$4MM AND FOR SMALLER PROJECTS DESIGNATED
BY DEO

ORGANIZATION

FIVE SECTIONS

- SUMMARY
- OPERATIONAL
- DESIGN
- CONSTRUCTION
- COST CONTROL

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PROJECT CRITIQUES

SUBJECTS FOR DISCUSSION

VALUE

CONTENT

METHODOLOGY

USE

COST

OTHER

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F

QUALITY CONTROL PERFORMANCE & VENDOR RELATION

<u>PLANT</u>	<u>VENDOR</u>	<u>PROBLEM</u>
BEAUMONT	WILSON	DEHYDRATOR COLUMN TRAYS
	WORTHINGTON	TURBINES & COMPRESSORS (1970)
	MITSUI	COMPRESSOR (1983) REACTOR FABRICATION
	FOSTER-WHEELER	REFORMER AIR PREHEAT SYSTEM FURNACE HEAT BALANCE PURGE GAS BURNER CAPACITY PIGTAIL HEAT SHIELDS
	LURGI	REACTOR TUBE SUPPORTS
CHAMBERS WKS	STONE & WEBSTER	RETURN TO COAL PROJECT MANAGEMENT
	B&W	COAL PULVERIZERS - BOILER PERFORMANCE
DEER PARK	VARIOUS	STUB-ENDS
	MITSUI	COMPRESSOR
	RIC-WIL	ACETIC ACID LINE
	STEINMULLER	WASTE HEAT BOILER

HJSTRANSKY
10/25/83

N 31728.07

DUP050146523

QUALITY CONTROL PERFORMANCE & VENDOR RELATION

<u>PLANT</u>	<u>VENDOR</u>	<u>PROBLEM</u>
DEER PARK	LINDE/LOTEPRO	MOL SIEVE VESSELS RECTISOL CTX HEAT TREATMENT CARBONYLS COLD BOX RELIEF VALVE
	TEXACO	VARIOUS
	COMBUSTION ENG.	BOILER
DELISLE	DART	PRESSURE FILTERS - PLATES
	AMITEK	WASTE FILTERS - RUBBER LINING
	WILLIAMS	FLASH DRYER HAMMER MILL
	WILMONT-FLEMING	SPRAY CONDENSER DISCS - WELDS STRIPPING SCREW - WELDS
	?	PUMP TANK NOZZLE FLANGES
JOHNSONVILLE	FULLER	ORE ROASTER
VARIOUS	ENGINEERING DESIGN CONTRACTORS	DORDRECHT, DEER PARK METHANOL, CARLIN NEVADA, CHAMBERS WORKS COAL, DEER PARK SYNGAS, MEMPHIS HYDROGEN

HJSTRANSKY
10/25/83

DUP050146524

QUALITY CONTROL PERFORMANCE
AND VENDOR RELATIONS

PANEL: J. P. MURPHY - DESIGN VIEWPOINT
J. P. MC FADDEN - M&L PERSPECTIVE
R. H. DUNLAP - LEGAL

Summary Notes of Comments

- Murphy - We let vendors off the hook. Du Pont steps in to solve problems. Lack of response by vendors in timely manner. We can't afford zero defects - not practical. Equipment deficiencies result from several sources and compromises such as specification quality, delivery time, price, etc. Every vendor, including those emphasizing quality have at some time failed our expectations. Quality being attained may already be cost effective.
- McFadden - Obtain performance by qualifying vendors, use bidders list and place on selected basis. Disclaimer for consequential damages is industry policy. M&L doesn't accept letting vendor off the hook. In most cases pursued, we have recovered some back charges. Need timely feedback from plants to pursue. Doubt we can afford a risk-free contract. Have to give vendor first opportunity to solve problem (pressure of time forces Du Pont in before vendor solves or we don't like vendor's proposed solution).
- Dunlap - Lot of money wasted by plant wanting specific item instead of considering alternatives. Have been pursuing claims. Expect increased emphasis on claims and litigation. List of outstanding claims being developed for more awareness. Usually exclude consequential damages but more tendency to pursue or set practical limit which will increase emphasis desired. Approval of drawings often weakens case in spite of what stamp says trying to limit approval. About \$14MM in claims outstanding. Claim awareness will increase recovery. Plants need to be aware of opportunities needing follow-up and challenge vendor. (Legal planning presentation to plants.) Adequacy of guarantees, etc. should be worked out ahead of time and if possibility of claim is poor vs risk, then Industrial Department should be aware. Use terms and conditions as part of the acceptance criteria.
- Discussion - Claims should produce incentive for vendors and others to do better job - emphasis to avoid problem from starting. All deficiencies are not vendor performance. Objective is not to have a problem in first place.

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