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TO: C. J. SLENTZ

FROM: [redacted]

<u>1982 COST REDUCTION ACCOMPLISHMENTS</u>

Attached are Newark and Newport reports detailing results of cost improvement programs for 1982. Explanations are included for major variance vs. forecast.

PAW/jmg

Attachments

R&D COST IMPROVEMENT ACCOMPLISHMENT REPORT - QA
NEWPORT PLANT
DATE FEBRUARY 9, 1983
(All value in thousands of Dollars)

| | FIRM (ACCOMPLISHED) 1982 | | | | | 1983 | GOAL (ACCOMPLISHED) 1982 | | | | | 1983 | GOAL (FORECAST) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | YR. | CARRY OVER | I | II | III | IB | YR. | CARRY OVER | 1984 | 1985 | 1986 |
| Energy | 72 | 35 | 40 | 7 | 154 | | | | | | | 65 | 290 | 160 | 395 |
| Substandard Reduction | 8 | 9 | 9 | 9 | 35 | | 1 | - | 2 | 13 | 16 | | 10 | 10 | 10 |
| Liquid NBMSA (Dimethyl QA) | 41 | 32 | 6 | - | 79 | | | | | | | | | | |
| Reduce Methylate | 19 | 11 | 13 | 2 | 45 | | | | | | | | - | 30 | 70 |
| Yield | | | | | | | 64 | 31 | - | 7 | 102 | | 30 | 75 | 200 |
| "Dowtherm®" | | | | | | | | | 57 | 125 | 182 | | 25 | 25 | 75 |
| Reduce Sitol | | | | | | | | | | | | 75 | | | |
| Caustic (WN) | | | 88 | 27 | 115 | | | | | | | 60 | | | |
| Water | | | | | | | | | | | | | 10 | 10 | 10 |
| Rewash Gamma | | | | | | | | | | | | 200 | | | |
| $H_2SO_4$ in SSE | | | | | | | | | | | | | 250 | 10 | - |
| R&D Manpower | - | 10 | 35 | 12 | 57 | | | | | | | | 80 | 90 | |
| Non-Cr QAQ | 11 | - | 7 | 5 | 23 | | | | | | | | | | |
| Site Total | | | | | | | | | | | | | | | |
| Current | 151 | 97 | 110 | 35 | 508 | | 65 | 31 | 2 | 145 | 243 | | 695 | 410 | 760 |
| Original | (83) | (84) | (44) | (29) | (240) | | (63) | (63) | (63) | (63) | (252) | | (770) | (100) | (40) |
| Site-Energy | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | |
| Current | 72 | 35 | 40 | 7 | 154 | | | | | | | | 290 | 160 | 395 |
| Original | (20) | (20) | (20) | (5) | (65) | | | | | | | | (50) | - | - |

QA

- Liquid NBMSA (Dimethyl QA) ($79M achieved vs. $40M firm forecast)

  Also includes unit-consumption reduction of 0.04 lbs. per lb. of QA.

- Reduce Methylate ($45M achieved vs. $50M firm and $200M goal)

  NaOMe reduced from 29% to 24% excess in line 2. Reduction to 15% excess scheduled for April demonstration.

- Yield ($102M achieved vs. $50M goal forecast)

  Represents a yield increase of 1.1% over 1981.

- R&D Manpower ($57M achieved vs. $50M firm forecast)

  Reductions for one early retirement (wageroll) and one transfer (exempt) were divided equally between CPC and QA.

- Dowtherm® Reduction ($182M achieved vs. $0M forecast)

  Represents savings from in-house component mixing, and for improving solvent recovery.

- Caustic (Waste Neutralization) ($115M achieved vs. $0M forecast)

  Represents savings from improved pH control in waste neutralization. Automation studies are scheduled for March.

R&D COST IMPROVEMENT ACCOMPLISHMENT REPORT-CPC
NEWPORT PLANT
DATE - FEBRUARY 9, 1983
(All Values in thousands of Dollars)

| YEAR | FIRM (ACCOMPLISHED) 1982 | | | | | CARRY OVER | GOAL (ACCOMPLISHED) 1982 | | | | | CARRY OVER | GOAL (FORECAST) 1984 | 1985 | 1986 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QUARTER | I | II | III | IV | YR. | | I | II | III | IV | YR. | | | | |
| Reduce Kerosene | | | | | | | - | 9 | 4 | 29 | 42 | | - | 75 | - |
| Pigment Losses | - | - | - | - | - | | - | - | - | - | - | | 130 | - | 155 |
| Energy | 36 | 31 | 29 | 35 | 131 | | | | | | | | 145 | - | 260 |
| Eliminate Newark Rewash | | | | | | | | | | | | | | 50 | 50 |
| Substandard Reduction | | | | | | | 2 | 4 | - | 3 | 9 | | 20 | - | - |
| CPC-AF Complex | | | | | | | | | | | | | | 200 | |
| R&D Manpower | 10 | 16 | 19 | 12 | 57 | | | | | | | | 80 | 90 | - |
| Reduce CPC-MS Use | | | | | | | | | | | | | 50 | | |
| Lower Cost BT-417/ BT-487 | | | | | | | | | - | - | - | | | | |
| Yield(Ex. Physical) | | | | | | | | | | | | | 25 | 25 | 25 |
| Water | | | | | | | | | | | | | | 70 | |
| Site Total | | | | | | | | | | | | | | | |
| Current | 46 | 47 | 48 | 47 | 188 | | 2 | 13 | 4 | 32 | 51 | | 450 | 510 | 490 |
| Original | (55) | (55) | (55) | (45) | (210) | | (37) | (36) | (67) | (66) | (206) | | (110) | (60) | (0) |
| Site Energy Total | | | | | | | | | | | | | | | |
| Current | 36 | 31 | 29 | 35 | 131 | | 0 | 0 | 0 | 0 | 0 | | 145 | 0 | 260 |
| Original | (40) | (40) | (40) | (30) | (150) | | (0) | (0) | (0) | (0) | (0) | | (50) | (0) | (0) |

## 1982 COST REDUCTION ACCOMPLISHMENTS
## PROGRAM WITH VARIANCES GREATER THAN 20%

CPC

- Reduce Kerosene ($42M achieved vs. $100M goal forecast)

  Kerosene consumption was reduced from 0.9 to 0.7 lb. per pound of CPC (goal 0.4 lb.) through improved decanter operation and improved BB/BBF phase separations. Loss rate in approaching the historical rate in plant I (0.6 lb./lb.).

- Pigment Losses ($0M achieved vs. $40M firm and $40M goal)

  Actual gate losses decreased from 900 to 300 pounds per day. As a percentage of production, losses remained constant (6%).

- R&D Manpower ($57M achieved vs. $20M firm)

  Reduction for one early retirement (wageroll) and one transfer (exempt) were divided equally between CPC and QA.

- Lower Cost Beta CPC ($0M achieved vs. $60M goal)

  The marketing opportunity has diminished for these products.

OTHER ORGANICS

R+D COST IMPROVEMENT ACCOMPLISHMENT REPORT
PLANT - NEWARK
DATE - 1/83
(All values in thousands of dollars)

| YEAR | FIRM (accomplished) 1982 | | | | | 1983 | GOAL (accomplished) 1982 | | | | | GOAL (forecast) 1983 | | 84 | 85 | 86 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QUARTER | I | II | III | IV | Yr. | Carry Over | I | II | III | IV | Yr. | Carry Over | New | | | |
| Drum Washer | | | | | 0 | | | | | | | | | | | |
| Dust Control | 0 | 1 | 2 | 3 | 6 | | | | | | | | | | | |
| Reduce Blending | | | | | | | 5 | 5 | 5 | 5 | 20 | | | | | |
| Eliminate Clarification | | | | | | | 0 | 0 | 0 | 3 | 3 | | 100 | 100 | 100 | |
| Personnel Reduction Not F/C | | | | | | | 0 | 0 | 84 | 125 | 209 | 292 | | | | |
| ITE TOTAL | | | | | | | | | | | | | | | | |
| - Current | 0 | 1 | 2 | 3 | 6 | | 5 | 5 | 89 | 133 | 232 | 292 | 100 | 100 | 100 | |
| - Original Fcst | (9) | (9) | (9 ) | (11 ) | (38) | ( ) | (10) | (10) | (12) | (13) | (45) | (5) | (0) | (0) | (0) | |
| TE E TOTAL | | | | | | | | | | | | | | | | |
| - Current | | | | | | | | | | | | | | | | |
| - Original Fcst | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | | | | | |

INORGANICS

R+D COST IMPROVEMENT ACCOMPLISHMENT REPORT
PLANT - NEWARK
DATE - 1/83
(All values in thousands of dollars)

| | FIRM (accomplished) | | | | | | GOAL (accomplished) | | | | | GOAL (forecast) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1982 | | | | | 1983 | 1982 | | | | | 1983 | | 84 | 85 | 86 |
| Quarter | I | II | III | IV | Yr. | Carry Over | I | II | III | IV | Yr. | Carry Over | New | | | |
| Liquid Alum | 9 | 15 | 0 | 0 | 24 | | | | | | | | | | | |
| Dust Control | 1 | 1 | 1 | 2 | 5 | | | | | | | | | | | |
| Eliminate Component | | | | | | | | | | | 0 | | 37 | 33 | 20 | |
| Flow Control | | | | | 0 | 34 | | | | | 0 | 4 | | | | |
| YE-698 Cont. | | | | | 0 | 24 | | | | | 0 | 95 | | 25 | 30 | |
| New Mill | 26 | 8 | 9 | 9 | 52 | | | | | | | | | | | |
| SITE TOTAL | | | | | | | | | | | | | | | | |
| - Current | 36 | 24 | 10 | 11 | 81 | 58 | 0 | 0 | 0 | 0 | 0 | 99 | 37 | 58 | 50 | |
| - Original Fcst | (33) | (33) | (35) | (37) | (138) | | (64 | (64) | (79) | (81) | (288) | (0) | (80) | (0) | (0) | |
| SITE E TOTAL | | | | | | | | | | | | | | | | |
| - Current | | | | | | | | | | | | | | | | |
| - Original Fcst | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | | | | | |

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N 26485.04

QA

# R+D COST IMPROVEMENT ACCOMPLISHMENT REPORT

PLANT - NEWARK
DATE - 1/83
(All values in thousands of dollars)

| | FIRM (accomplished) | | | | | | GOAL (accomplished) | | | | | GOAL (forecast) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1982 | | | | | 1983 | 1982 | | | | | 1983 | | 84 | 85 | 86 |
| Quarter | I | II | III | IV | Yr. | Carry Over | I | II | III | IV | Yr. | Carry Over | New | | | |
| Reduce Substandard (Nwpt-Nwk Program) | | | | | | | 3 | 3 | 3 | 3 | 12 | | | | | |
| ITE TOTAL | | | | | | | | | | | | | | | | |
| - Current | | | | | | | 3 | 3 | 3 | 3 | 12 | | 5 | | | |
| - Original Fcst | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | (3) | (3) | (3) | (3) | (12) | | (0) | | | |
| TE E TOTAL | | | | | | | | | | | | | | | | |
| - Current | | | | | | | | | | | | | | | | |
| - Original Fcst | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | | | | | |

CPC

# R+D COST IMPROVEMENT ACCOMPLISHMENT REPORT
PLANT - NEWARK
DATE - 1/83
(All values in thousands of dollars)

| Year | FIRM (accomplished) 1982 | | | | | 1983 | GOAL (accomplished) 1982 | | | | | GOAL (forecast) 1983 | | 84 | 85 | 86 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarter | I | II | III | IV | Yr. | Carry Over | I | II | III | IV | Yr. | Carry Over | New | | | |
| Reduce Substandard (Nwpt-Nwk Program) | 1 | 1 | 2 | 2 | 6 | | | | | | | | 5 | | | |
| ITE TOTAL | | | | | | | | | | | | | | | | |
| - Current | 1 | 1 | 2 | 2 | 6 | | | | | | | | 5 | | | |
| - Original Fcst | (1) | (1) | (2) | (2) | (6) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | | (0) | | | |
| TE E TOTAL | | | | | | | | | | | | | | | | |
| - Current | | | | | | | | | | | | | | | | |
| - Original Fcst | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | | | | | |

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N 26485.06

# COST REDUCTION VARIANCE EXPLANATIONS

| | $M FIRM | $M ACTUAL | |
|---|---|---|---|
| **INORGANICS** | | | |
| Liquid Alum | 48 | 24 | Production lower then forecast. |
| Eliminate Component | 19 | 0 | Program delayed. To be implemented IIQ83. |
| Flow Control | 65 | 0 | Program delayed. Project installed 3Q82. Initiated testing during remainder of 1982. Savings anticipated to begin IQ83. |
| YE-698-D | 240 | 0 | Initial trials unsuccessful. Program scope redefined 3Q82. Will batch strike/finish continuous. One trial successful in 4Q82. Savings to be implemented during IQ83. |
| **OTHER ORGANICS** | | | |
| Drum Washer | 30 | 0 | Program cancelled. Unable to modify equipment for efficient use. |
| Reduce Blending | 40 | 20 | Actual production lower than forecast. |
| Eliminate Clarification | 5 | 3 | Development work required, delayed plant trials. Full implementation expected by IIQ83. |