



ESCAMBIA PLANT
INTEROFFICE MEMORANDUM

To: R. E. Jones Date: 7 October 1976

From: W. J. Stueben Copies:

Re: Monthly Report - Safety Dept. - September 1976

The Safety Engineer spent two days observing the operation of the change house at Pasadena Plant. Some of the principles used at Pasadena will be applied to projects at Escambia.

The Dispensary/Safety Office Building was put into service during September. All of the plant medical, safety and security services are now at the plant gate enabling us to handle plant emergencies in a much safer manner.

The plant fire truck was upgraded with additional fire fighting equipment and a cap for the load bed. Planned additional changes will enable the fire truck to get to a fire with more equipment sooner than we are now able to do.

Industrial Hygiene Programs were discussed at length with J. Novak and R. R. Spiegelhalter. Included were plans to sample all chemicals currently proposed for regulation by OSHA and the Amines Plant.

The Safety Engineer attended a Process Hazards Review Seminar at Trexlertown. This will allow better communication when discussing the concepts of failure mode analysis and fault free analysis.

Inputs were also made in the following areas: PVC expansion, Nitric Acid plant failure, Amines susceptibility, plant security, escape respirators, DNT plant reactivation, emergency procedures and Calvert City safety.

WJ Stueben
W. J. Stueben

WJS:j sr

AP00041951

MONTHLY REPORT

October, 1976

CHEMICALS GROUP
ESCAMBIA PLANT

AP00041952



Air Products and Chemicals
INC.

ESCAMBIA PLANT
INTEROFFICE MEMORANDUM

To: A. K. McMillan

Date: 10 November 1976

From: R. E. Jones

Copies:

Re: Monthly Report - October, 1976

The Escambia Plant operation continues good with positive variances being generated in most areas. The ammonia plant contribution to plant variance was particularly good as production of 8,047 tons (114% of standard) was achieved with a corresponding good efficiency of 41.2 MM BTU/ton (standard 45.7).

The ammonia plant has operated continuously since June 19 without an outage for defouling the primary waste heat boiler. We are projecting that this run will continue until the scheduled January turnaround. The colder month operations should continue to show the same type results as those recorded in October.

Nitric acid production of 14,137 tons was 112% of standard with sales limiting during the first 12 days of the month. The No. 1 plant was shut down on 27 September for a scheduled outage for extensive Masar column inspection to determine cause of carry-over. Velocities in the risers to the Sulzer packing area were very high causing a venturi effect and subsequent entrainment. After modifications, we are still experiencing some entrainment and recommendations have been received from Koch to enlarge the liquid distribution ports which were causing some atomization of the liquid feed to this section. These modifications will be made in November for both plants.

The No. 2 plant operated continuously during the month except for a short duration outage resulting from trip-out caused by failure of a boiler feedwater pressure regulator. At month end gauze efficiencies had declined to a point where a shutdown to change gauze will be taken early in November.

Area B operations were all in excess of budget due to high sales requirements. Monthly production figures for the ammonium nitrate area follow:

AP00041953

	<u>October</u>		<u>Year to Date</u>	
	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
83% AN	14,995	8,705	14,995	8,705
Prills	14,210	7,439	14,210	7,439
Urea	2,020	1,798	2,020	1,798
Urea/Solutions	5,687	4,435	5,687	4,435
Bay-Sol	1,732	135	1,732	135

Continued above budgeted sales requirements are to be expected for November and December and should continue to show this improvement in the A.N. area operations.

Methanol production for October was 1,755 M gallons or 48% of budget as limited by sales. During this period the No. 2 reformer train is being modified for better operations. Mixed gas feed preheat will be increased to increase throughput and the current brick roofs in these reformers will be replaced with an insulating blanket type refractory. This work is scheduled for completion by November 15. Gas efficiencies continue to be below budget due to the lower rates induced by the reformer outages caused by the reduced sales requirements.

PVC continues to exhibit excellent results with another record production established for October at 7,716 M lbs. The previous record was 7,500 M lbs. established last August. Off-grade production continues very low at 0.6%. VCM efficiencies were also above budget at 96% for the month.

Personnel monitoring showed 80% of the 8-hour TWA samples below 1.0 ppm, and 95% of the 15-minute TWA below 5.0 ppm.

November is expected to continue to reflect the current excellent operations. Preparations are continuing for the December shutdown to tie in the new facilities.

The Amines plants operated very well in October in spite of continued efficiency problems with the high temperature ethylamines process. Alkyl efficiencies were very low at about 75% as reaction temperatures were maintained very high (790-800°F) in order to reduce ethyl crudes inventories to minimum levels as this was the last ethylamines production run scheduled for Pace.

The No. 1 plant was turned around to methylamines production on the 11th and remained down until month end for several process modifications necessary to achieve the budgeted 300M lbs./day rates consistently. With

AP00041954

10 November 1976

a scheduled four month idle plant time for this plant, no sales were lost because of the outage. Startup operations were hampered somewhat by the continued presence of the ethylamine tars throughout the reaction system, and some high pressure drops are occurring at present due to buildup of these tars and may limit rates for this run.

The No. 2 plant continued on MIPA production with the best results ever recorded. Both raw material efficiencies and product rates exceeded budget throughout the run and achieved the greatest production level for a total MIPA run. On 25 October the run was shut down for product turnaround to DNPA and the plant is in startup operations at present.

October effluent results continue to be better than interim NPDES limits in spite of higher flows resulting from the use of once-through well water in the ammonia plant cascade cooler. Plant effluent loading was 1055 lbs./day of Total-N at 2.3 MGD total water. Revisions are being made in the plant to utilize the cascade cooler water as cooling tower makeup water. November flows should return to normal.

The final effluent treatment project is proceeding on schedule with a forecasted 15 November startup of the facility. All critical equipment has been installed with the exception of the "Echo" pond baffles. The project remains on budget.

November is expected to show continued good results as above budget performance is expected in all areas with the exception of methanol. Methanol will be operating at maximum levels by month end. Preparations continue at a high level for the PVC expansion tie-in and startup. This project continues to look very good with respect to budget. Amines will produce methyls and DNPA in November and both products are expected to perform at budget rates and efficiencies.


R. E. Jones

REJ:fls
Attachments

AP00041955

As Air Products

COST VARIANCE SUMMARY
\$(000)

Period Reported October, 1976

ESCAMBIA PLANT																
ITEM	AGRICULTURAL								POLY VINYL CHLORIDE	INDUSTRIAL CHEMICALS					TOTAL ESCAMBIA PLANT	
	Ammonia	Sulfuric Acid	81% AN Solution	AN Prills	Urea	UAN Solution	Ray Sol	Acetone Other		Total	Methanol	Methyl Alcohol	Higher Alcohol	14% Plant		Total
PRODUCTION - BUDGET	7,626	7,750	8,705	7,439	1,798	4,435	135	2,408	-----	6,788	3,660	2,099	4,012	-----	-----	-----
- PLANNING	7,067	12,408	14,113	10,883	1,936	4,951	135	2,721	-----	6,788	3,363	3,628	4,522	-----	-----	-----
- ACTUAL	8,047	14,137	14,995	14,210	2,020	5,687	1,732	2,700	-----	7,718	1,755	2,249	5,027	-----	-----	-----
ACTUAL VARIANCES																
A. PRODUCTION RELATED	19	1	14	3	-	(1)	(1)	-	35	11	(12)	(4)	3	-	(13)	33
I. Raw Material Conversion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. Volume	-	-	-	-	2	3	-	-	5	36	-	(61)	59	-	(2)	39
a) Throughput	43	-	-	-	-	-	-	-	43	18	-	-	-	-	-	43
b) Outstream	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c) Off-specs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Volume	43	-	-	-	2	3	-	-	43	54	-	(61)	59	-	(2)	100
III. Spending (Use) (\$ Std. /Unit)	-	(2)	2	7	(2)	3	(2)	-	6	7	3	-	1	-	4	17
a) Labor	12	(3)	(2)	(4)	-	1	(2)	-	2	1	3	(3)	(10)	-	(9)	4
b) Maintenance Labor	-	-	-	-	-	-	-	-	-	9	5	(4)	(10)	-	-	1
c) Maintenance Material	30	9	(4)	6	3	1	-	-	42	(27)	23	(1)	10	-	22	53
d) Utilities	7	3	(5)	12	3	-	-	-	16	(14)	8	(1)	15	-	7	24
e) Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Spending	52	7	(9)	14	2	5	(4)	-	67	(24)	42	(3)	9	-	48	91
IV. Spending (Rate)	4	4	3	6	1	-	-	-	18	10	10	3	16	-	29	57
a) Facility Services & Overheads	1	1	(1)	(2)	-	(1)	-	-	3	2	2	(2)	(3)	-	(10)	9
b) Non-Facility Services & Overheads	3	-	-	-	-	-	-	-	-	(2)	(3)	(2)	(3)	-	-	(12)
c) Depreciation, Taxes & Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d) Labor Salaries & Fringes	-	-	-	-	1	(1)	-	-	21	2	9	1	13	-	23	49
Total Spending (Rate)	8	6	2	5	1	(1)	-	-	21	2	9	1	13	-	23	69
TOTAL PRODUCTION RELATED VARIANCES	122	14	7	22	5	6	(5)	-	171	46	39	(67)	84	-	56	273
B. V. Purchase Price Variances	7	-	-	(1)	-	-	-	(31)	(25)	74	6	3	52	-	61	110
a) Raw Material	8	1	2	2	-	-	-	-	13	4	11	1	-	-	18	35
b) Purchased Utilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c) Feedstock Mix	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d) Other (Mater. Mix'l, op. sup's., etc.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Purchase Price	15	1	2	1	-	-	-	(31)	(12)	78	17	4	58	-	79	141
C. VI. Business Variances	-	29	3	47	-	-	61	-	160	(28)	(156)	-0-	19	-	(137)	(25)
a) Volume	(301)	-	-	-	-	-	-	-	(301)	23	-	-	13	-	13	(265)
b) System Variances	-	-	-	-	-	-	-	-	-	(17)	(26)	(36)	-	-	(62)	(79)
c) Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Business Variances	(301)	29	3	47	-	-	61	-	(161)	(22)	(182)	(36)	32	-	(186)	(169)
TOTAL PRODUCT COST VARIANCE FROM STD.	(164)	44	12	70	5	6	56	(31)	(2)	102	(126)	(99)	174	-	(51)	49
BUDGETED VARIANCES																
B.VII. Budgeted Variances From Standards	35	-	-	-	-	-	-	(25)	10	78	-	(5)	(12)	-	(17)	88
a) Raw Material Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b) Purchased Utilities Cost	25	(91)	(20)	(49)	(3)	(1)	-	-	(137)	(13)	31	-	-	-	31	(117)
c) Volume	-	-	-	-	-	-	-	-	-	(5)	-	-	-	-	-	-
d) Spending	(286)	-	-	-	-	-	-	-	(286)	(5)	-	-	35	-	35	(240)
e) Systems	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Budgeted Variances	(226)	(91)	(20)	(49)	(3)	(1)	-	(25)	(412)	49	31	(5)	23	-	49	(316)
VARIANCE FROM BUDGET																
B.VIII. Variance From Budget	97	14	7	23	8	7	(5)	-	151	70	39	(67)	84	-	56	277
a) Production Related	(20)	1	2	1	-	-	(6)	(6)	(22)	-	17	9	70	-	96	74
b) Purchased Price Related	(15)	120	23	92	-	-	61	-	281	(17)	(213)	(36)	(3)	-	(252)	12
c) Business Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL VARIANCE FROM BUDGET	62	135	32	116	8	7	56	(6)	410	53	(157)	(94)	151	-	(100)	363

AP00041956

PRODUCT COST VARIANCE STATEMENT

FORWARD REPORT

Facility Pace

() Unfavorable Variance from Standard

November 16, 1976

Period Year End, FY 1977

	Ammonia	Nitric Acid	83% AN	Prills	Urea/Sol.	Methanol	Amines	PVC	Total
Production (000)	84,800	151,300	169,358	130,620	23,226	40,120	68,680	115,700	-
Budget	86,327	172,087	200,245	147,000	26,261	38,065	68,680	116,628	-
Actual									
<u>Production Related Variances</u>									
I. <u>Raw Material Conversion</u>	91	10	72	5	(14)	(11)	(100)	-	53
I. <u>Volume</u>									
a) Throughput	19	-	-	-	84	-	-	36	139
b) Onstream	48	-	-	-	-	-	-	-	48
c) Offgrade	-	-	-	-	-	-	-	33	33
	67	-	-	-	84	-	-	69	220
II. <u>Spending (Use) (at std. \$/unit)</u>									
a) Labor	-	-	24	35	(6)	13	(30)	7	43
b) Maintenance Labor	42	10	(24)	(34)	(13)	31	-	1	13
c) Maintenance Material	27	-	(9)	(37)	(13)	55	-	9	32
d) Utilities	114	96	8	47	1	46	66	(47)	331
e) Other	15	27	(4)	37	(10)	16	40	19	140
Total Spending (Use)	198	133	(5)	48	(41)	161	76	(11)	559
IV. <u>Spending (Rate)</u>									
a) Facility Services & Overheads	8	4	7	13	1	20	39	20	112
b) Non-facility Services & Overheads	2	1	-	1	-	4	4	4	16
c) Depreciation, Taxes & Insurance	6	1	(1)	(2)	(1)	(3)	(84)	(14)	(98)
d) Labor, Salaries, Fringe	-	-	-	-	-	-	-	-	-
Total Spending (Rate)	16	6	6	12	-	21	(41)	10	30
TOTAL PRODUCTION RELATED VARIANCES	372	149	73	65	29	171	(65)	68	862

AP00041957

PRODUCT COST VARIANCE STATEMENT

FORWARD REPORT

Pace
Page 2
Year End

4\$ () Unfavorable Variance From Standard

	Ammonia	Nitric Acid	83% AN	Prills	Urea/Sol.	Methanol	Amines	PVC	Total
3. V. Purchase Price Variances									
a) Raw Material	-	-	-	(1)	-	12	335	(219)	127
b) Purchased Utilities	-	1	-	2	-	22	7	4	36
c) Feedstock Mix	-	-	-	-	-	-	-	-	-
d) Other (maint. mat'l, op. sup., etc.)	-	-	-	-	-	-	-	-	-
Total Purchase Price	-	1	-	1	-	34	342	(215)	163
3. VI. Business Variances									
a) Volume	-	389	116	292	661	(208)	5	(340)	915
b) Systems Variance	(1,130)	-	-	-	-	-	13	363	(754)
c) Other	-	-	-	-	-	(26)	(36)	(36)	(98)
Total Business Variances	(1,130)	389	116	292	661	(234)	(18)	(13)	63
TOTAL PRODUCT COST VARIANCES FROM STANDARD	(758)	539	189	358	690	(29)	259	(160)	1,088
VII. Budgeted Variances from Standard									
a) Raw Material Cost	28	-	-	-	-	-	-	(172)	(144)
b) Purchased Utilities Cost	-	-	-	-	-	-	(165)	-	(165)
c) Volume	-	-	18	(12)	(1)	(7)	-	-	(2)
d) Spending	(1)	-	-	-	-	-	-	(22)	(23)
e) System	(3,176)	-	-	-	-	-	(5)	4	(3,177)
Total Budgeted Variances	(3,149)	-	18	(12)	(1)	(7)	(170)	(190)	(3,511)
TOTAL VARIANCES FROM BUDGET	2,391	539	171	370	691	(22)	429	30	4,599
a) Production Related	373	149	73	66	33	171	(65)	90	890
b) Purchased Price Variances	(28)	1	-	1	-	34	507	(43)	472
c) Business Variance	2,046	389	98	303	658	(227)	(13)	(17)	3,237

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